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RACE AND NATION IN EUROPE.

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RACIAL relations are arousing more general interest to-day than at any earlier period. This is due to several reasons. In the first place the world is "shrinking" rapidly and the erstwhile distant races are now jostling each other to an extent which has never occurred before. In the second place many of the so-called "inferior" or "coloured" races are proving themselves equal to the European races in various fields of activity which before were closed to them.

Until recently ethnologists were content for the most part to study isolated groups of peoples without any general endeavour to explain precisely how they were inter-related, or how they had become diffused over the world. As far as the larger aggregates of native population are concerned the layman usually follows those early ethnologists who taught that Europe is inhabited by a highly cultured and definite *white* race; that in Asia live a large number of *yellow* races in a moderate state of cultural development. In Africa and Australia are benighted *black* races; while America, for no very evident reason, is separated off either as a *red* man's continent, or as the habitat of a variant of the yellow group. This classification by continents and colour is not only contrary to fact—but it is a very dangerous one, since it specifically obscures a real brotherhood of man which modern ethnology is demonstrating.

The work of Ripley on the "Races of Europe" published in 1900, may be said to have inaugurated a new epoch in ethnology. In Europe, for obvious reasons, racial problems had been studied from many points of view—and to a far greater degree of detail than in any other portion of the world. Here anthropometric data are fairly complete and here it was easy to demonstrate the fallacy of trusting to language as a test of race. In Europe also, the migrations were better understood. Chief of all, here alone the fossil relics of bygone peoples have been investigated fairly fully, and the evidence correlated and applied to modern problems. Ripley's special contribution perhaps was to consider the continent in its setting among other lands, and to use Asiatic and African data to elucidate European problems. Moreover he laid great stress on adequate knowledge of the environment, and showed clearly that the disposition of the racial stocks in Europe depends to a very large degree on the varying topographies and climates of that continent.

It is the purpose of this paper to show how the principal *racial* stocks in Europe are arranged, and especially to point out how they differ from the *national* groups of to-day. Finally their relations with races in other continents will be briefly referred to.

Of all the criteria used by the ethnologist in racial classification, skull-shape and hair character are almost universally accepted as the most important. Stature, and colour of the hair, of the eyes and skin are of secondary importance. This latter group of criteria seems to react much more quickly to a changing environment than do the two former. Since there is not much difference in the character of the hair (which is more or less waved throughout), let us first of all examine the modern peoples of Europe with regard to head-shape.

If the average English skull be measured it will be found that the greatest breadth is 78 per cent. of the greatest length. This figure is the cephalic index. If appropriate indices for other regions are plotted on a map of Europe, and "isopleths" drawn through places having the same index—we obtain the series of lines shown in Fig. 1. Here the narrow skulls (approaching the negroid) are shown by heavy ruling; while the broader skulls are shown by white spaces or fine dots. The narrowest skulls (75) occur in Cor-

Fig. 1.—Racial stocks in European nations. (From "Geographical Review.")

sica and Algeria, the broadest (88) in Albania and the high Alps. Speaking generally, we find a *marginal population with more primitive skulls,* and a *central population* (especially numerous on the Asiatic side) *with broad skulls.* This characteristic distribution occurs in Africa, in Australasia and in America; and is so fundamental in the science that it might be termed the "First Ethnological Principle."

Considering the map in detail we see a great wedge of broadheads penetrating Europe as far as Central France, and separating the narrow-heads into a north-west moiety, and a southern moiety. These two latter groups, though allied in skull-shape and hair-texture, differ considerably in colour and stature. In the north-west the people are tall and rather fair, in the south they are short and dark. The former have been termed the *Nordic* race, the latter the *Mediterranean.* The central wedge consists of the more clearly differentiated *Alpine* races.

Racial egotism among British and German peoples has led to an unjustified glorification of the Nordic race, which would be ludicrous if it were not a very real factor in world politics. There are two reasons why the intelligent layman should be chary in believing Nordic propaganda. The first reason will be obvious from the map, and deals with the essential difference between race and nation. Assuming that the Nordic possesses all the virtues and the Alpine and Mediterranean none, nothing is clearer than that all the important nations of Europe are composed partly of "virtuous" Nordics, and partly of "vicious" Alpine or Mediterranean stocks! France, for instance, is a *nation* of marked solidarity, yet even to-day it is perfectly easy to pick out whole regions inhabited by one or other of four absolutely distinct racial stocks. In the Dordogne (behind Bordeaux) are large primitive communities which have changed very little from those Paleolithic days in the Ice Age when they first developed the Cro-magnon culture.

In the Pyrenees dwells that unique group, the Basques; who have been so isolated that they have maintained a pre-Aryan language, possibly from the same far distant times. In Provence and the Alpine Departments is the advance guard of the Alpine race. In the north is a group of Nordic peoples, who have been described as racially more Teutonic than the German nation.

If we turn to Germany we find the plains occupied by Nordics and the southern highlands by Alpines. In Italy is a mixture at least as complex as that constituting the French nation. In Britain we find a dominating Nordic race in the east and a Mediterranean race in the north and west. There are moreover noteworthy centres of Alpine peoples, as in Kent, North Wales, and parts of the High-

lands, in central Wales is a veritable Neandertaloid nucleus. Scandinavia is of much the same composition as Britain, while Greece rivals France and Italy in its complexity.

What then determines nationality? It would seem to depend essentially on environment. Given a more or less uniform environment—separated by some fairly well-marked natural features from adjacent regions—and in time a nation will develop from most diverse peoples. Environment, time and goodwill are more important than race, language or religion in welding the members of a successful national group. How else can we explain the Swiss Confederation with its several hostile religions and four languages with 64 different dialects?

Another aspect of the problem is well illustrated by the prewar Austrian Empire. Here were at least six conflicting national groups, Austrians proper (i.e., Germans), Czechs, Magyars, Roumanians, Serbs, and Croats; who differed *inter se* in language, in religion and ideals. Yet they occupied a fairly homogeneous environment—the basin of the middle Danube, and all these nations, though with very diverse histories, belonged to the same group of Alpine peoples. However, goodwill and sufficient time of contact may yet weld them into a harmonious Central European community.

Immigration problems concern the statesman of to-day to a very considerable extent. Yet most of them are not conversant with the major principles of ethnology, and so confuse nation and race. They quote statistics dealing with British or German nationals and compare them with other statistics concerning Italian or Greek nationals. The former are taken to represent Nordic peoples, the latter Mediterranean. Conclusions are drawn which, in their opinion, demonstrate that Nordic man is a more valuable citizen than Mediterranean man. Such conclusions are not trustworthy. If national statistics for most of the European countries are examined, one usually finds that good and bad qualities among immigrants do not follow ethnical lines at all.

It is difficult to say what they do follow. Possibly education, or possibly the isopleths of *health* are better guides. Huntington shows that these centre about Holland, and that the nations become less and less healthy as we move outward therefrom. The same writer in his book, "Character of Races," gives charts which may indicate that the Alpine mentality lends itself especially to progress in science and philosophy, while the Nordic folk turn more definitely to art and literature. This, in the present writer's opinion, is the type of permanent difference which is to be expected. All three

major European races have greatly contributed in the past to civilisation and progress—and will do so in the future.

Another aspect of the problem to which attention may now be drawn concerns racial mixture. It is a thousand pities that the numerous writers who dwell so glibly on the value of racial purity have so little knowledge of racial history. While it is true that three different stocks can be determined in Europe, it is also true that intermingling among them has been taking place for thousands of years. On the margins of the Alpine wedge lies a belt of "intermediate" people due to the merging of Alpine and other stocks. Further, if we try to decipher the history of the Nordic peoples we are led to the conclusion that they are a hybrid race fairly closely akin to the Mediterranean peoples.

Many years ago the Italian ethnologist, Sergi, indicated this fact, but he believed that the Nordics to a large extent moved *northward* from south-west Europe into the Baltic regions where we now find them. Later data, largely from the tumuli and other burial places of Russia, show that a large population of narrow-headed people preceded the modern Slav (Alpine) population of Russia. Dixon in his recent book, "Racial History," is of the opinion that this prehistoric people (whom he calls the Caspian Race) slowly moved westward to the Baltic region. They merged with the earlier races there, many of whom were negroid or even

Fig. 2.—A generalised diagram, illustrating the order of migration of the early races into Europe in Paleolithic times. The Negroid (Neandertaloid? etc.) entered first, by the south. The Mediterranean folk used the same route—the north being relatively impassable. Their Northern wing (the Caspian or Proto-Nordic folk) was probably held in a cul-de-sac by the seas and swamps of Central Europe at the end of Paleolithic times. The more cultured Alpines were the first to use the Mid-European track when it became available at this time. Many thousand years later the Proto-Nordics reached Germany.

Australoid (like our aborigines) and so formed the blend which we know as the Nordic Race. In the writer's opinion many Alpine peoples must also have been incorporated.

The original Caspian race differed little from the Mediterranean race—but throughout post-glacial time it has been subjected to a cold and (in general) moist environment which has probably led to the variation in the secondary ethnical characters already mentioned.

In conclusion the writer hopes in a paragraph or two to link up the European races with their relations elsewhere. Wherever we study these problems of racial relations and migrations we find the same general features. A centrifugal movement from Asia, whereby negroid and other narrow-headed races are thrust to the margin of the continental area by broad-headed folk. In Fig. 2, I have endeavoured to emphasise how important it is to study prehistoric geography in conjunction with the imperfectly known racial history. The map is an attempt to reconstruct Europe in Paleolithic times. The dominant features are the great extent of land to the west (where now are the North Sea and English Channel) and to the south where two large lakes represent the Mediterranean. On the other hand, the belt of land from the Baltic to Central Asia was probably on the whole lower than it is to-day. This fact, combined with the greater rainfall which almost certainly obtained then, led to the much greater extent of the Baltic, Black, Caspian, and Aral Seas. It is probable that the vast Pripet marshes of West Russia then constituted a large lake; and indeed a practically continuous belt of seas or lakes—as suggested in the map—probably extended from Norway to Turkestan during part of this period.

Some such factor seems necessary to explain the late arrival of the Proto-Nordic peoples in north-west Europe. They certainly followed the early Alpine group, who in turn were preceded by most of the southern or Mediterranean group. The writer suggests that a northern (Proto-Nordic or Caspian) wing moved out of Central Asia to the north-west about the same very early period as the Southern Mediterranean wing went to the south-west. Pressure from the Alpine population growing up in Central Asia was, I imagine, the chief factor in causing these migrations. The southern wing moved slowly along the Mediterranean coast—following the route of earlier Neandertaloid (Australoid) and Negroid races. As conditions in Central Europe improved with the retreat of the great Ice sheets to the north-west—the Danube "corridor" became available but was occupied by hordes of Alpine people. Meanwhile the northern wing (of the Mediterranean type) was quite probably held in a *cul de sac* near the Caspian Sea for

many thousands of years, and only managed to migrate to the Baltic region when the seas and swamps slowly disappeared under the drier conditions of the present epoch. This perhaps explains also why the broad-headed Alpine races of central Europe preceded the narrow-headed Nordics into Europe—for, as far as the writer knows, this is almost the sole exception to the world-wide rule that "narrow-heads migrate before broad-heads."

If now we turn to the other regions bordering on Central Asia, to India or to China; we find the same kind of zones. In southern India the Australoid peoples are still abundant, as also are many races akin to the Mediterranean. Many of the tribes of Bengal are Alpine, according to the recent work of Chanda. In China the Alpine folk are greatly in the majority—but the marginal Japanese according to Dixon, are largely Caspian. Many of the earlier races (akin to the narrow-heads of West Europe) have been driven right out of Asia, and are scattered throughout the East Indies and Polynesia. This explains the remarkably European appearance of the Maori of Northern New Zealand. The outer Australoid zone is of course better preserved in Australia than anywhere else. But the *white* population in Australia should feel interested in this line of scientific research, which seems to indicate that our humble aboriginal predecessors in Australia, also antedated the historic nations in Europe and contributed in a recognisable degree to build up the races of that continent.

NOTES BY THE WAY.

No. 1.

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As for me, I am delighted at the hubbub of discussion—east, west, north, and south. Centuries ago our fathers suffered in silence, or cried out in prayer. In this our blessed new age we get hold of every procurable kind of thunder and lightning, and "put the wild waters in a roar" of protest and discussion. Some prophets, hearing the din, talk of doom and collapse; whereas the very tempest is a sign of awakening to the presence and menace of social disease and confusion. The world of 1914 needed more criticism than it got. In 1925 the criticism shakes the earth and blazes over our sky. Not only does the storm test our political, economic, and financial institutions; not only does it beat upon every church, every shrine, and every form of philosophy; it challenges with a force that would have thrilled even Nietzsche with joy, our moral conventions, and I am glad. We have to-day, as a community of races and nations, more political wariness, insight and good sense than in 1914; more appreciation of educational methods, scientific or civic; more willingness to consult the masses, and not merely academic or diplomatic coteries; more readiness to welcome the organised opinion of women; more keenness to read the counsel rendered by history and evolution.

—F. G. Gould in *The Literary Guide*.

MODERN THINKERS—III. GIOVANNI GENTILE

By A. C. Garnett, M.A., Litt.D., Lecturer to Tutorial Classes in Philosophy in the University of Adelaide.

IN "The Theory of Mind as Pure Act" Gentile has rendered the student of philosophy the valuable service of setting out in comparatively brief form a reasoned statement of his mature philosophical thinking. It is not an easy work to read, for the author has packed into it in concise form the thought of many years, and he revels in brilliant paradoxes which are intensely stimulating, but the meaning of which is not always easily grasped. The aim of this essay is therefore partly expository—to offer an interpretation of Gentile's thought or to serve as an introduction to the study of his work—and partly to present a criticism of his argument and conclusions.

Gentile is an Idealist and commences the exposition of his philosophical position by comparing his doctrine with, and distinguishing it from, that of Berkeley. Berkeley, he says, taught that "Reality is conceivable only in so far as the reality conceived is in relation to the activity which conceives it, and in that relation it is not only a possible object of knowledge, it is a present and actual one. To conceive a reality is to conceive, at the same time, and as one with it, the mind in which the reality is represented; and therefore the concept of a material reality is absurd." With this Gentile agrees. But, he says, even while maintaining "the ideality of the real" and declaring that *"esse est percipi,"* Berkeley surrenders all that is valuable in the position by "declaring that reality is not properly an object of the human mind and contained therein, nor, strictly speaking, a thought of that mind, but the totality of the ideas of an objective, absolute Mind, whose existence the human mind presupposes." "If we conceive reality in this way," cogently argues Gentile, "we make it impossible to conceive human thought, because a reality which is already complete and which, when presented to thought, does not grow and continue to be realised, is a reality which in its very conception excludes the possibility of conceiving that presumed or apparent new reality which thought would then be . . . From Berkeley's standpoint thinking, strictly, is not anything. Because, in so far as the thinking thinks, what it thinks is already thought; for human thought is only a ray of the divine thought, and therefore not something itself new, something other than the divine thought."

This division between human thinking and the eternal thought of God, which makes human thinking unreal and the thought of

God static, Gentile attributes to Berkeley's empiricism which rendered him unable to realise the reality of the subject as continued, experienced activity: "Berkeley indeed drew attention to the subject which always stands over against the object. But then the subject which Berkeley meant was not the subject truly conceived as subject, but rather a subject which itself was objectified and so reduced to one of the many finite objects contained in experience. It was the object which we reach empirically whenever we analyse our mental act and distinguish therein, on the one hand the content of our consciousness, and on the other the consciousness as the form of that same content." But the subject is only truly conceived, says Gentile, when we adopt what he calls "the transcendental point of view," when we obtain the concept of the "transcendental ego." If we would know the essence of the mind's transcendental activity we must not present it as spectator and spectacle, the mind as an object of experience, the subject an outside onlooker. . . . . The transcendental point of view is that which we obtain when in the reality of thinking we see our thought not as act done, but as act in the doing. This act we can never absolutely transcend since it is our very subjectivity, that is, our own self: an act therefore which we can never in any possible manner objectify. The new point of view which we then gain is that of the *actuality* of the I, a point of view from which the I can never be conceived as its own object."

Gentile thus transforms Berkeley's Idealism, in which reality is explained as the eternal thought of God, of which all human thoughts are but rays, into an Idealism in which reality is the continuous thinking activity of a transcendental thinker and each human thinker in his transcendental activity of thought *is* that transcendental thinker, though the object of each human thinker is not, at any time, the whole of the object created in the thinking of the one universal thinker. Gentile's thought on the relation between individual human thinkers and the rest of the thought process of the universe (the thought process, we might have said, which *is* the universe) is not made very clear. It is a conception of reality as the continuous activity of thought, which thought, it seems, becomes self-conscious at certain points as it spatialises itself, i.e., sets out its objects under the form of space as organisms, etc. Such points of self-consciousness, which are always attached to certain organisms, are conscious only of that portion of the total object of thought (the universe) with which those organisms are connected in certain definite ways in space and time and in causal relationship. Further, these points of self-consciousness are, to a certain extent, shut off from direct consciousness of each other; yet they are not so

completely dissociated as is commonly imagined; there is, Gentile seems to believe, a direct touch of what we call soul and soul.

In developing his argument for the fundamental oneness of spiritual reality and its identity with the active, experient self, Gentile seeks support in the facts of our deeper spiritual experience. "Nothing has for us spiritual value save in so far as it comes to be resolved into ourselves who know it." "Whenever we want to understand something which has a spiritual value, something which we can speak of as a *spiritual fact,* we have to regard it not as an object, a thing which we set before us for investigation, but as something immediately identical with our own spiritual activity." "A fundamental condition of understanding others is that our mind should penetrate their mind. The beginning of apprehension is confidence. Without it there is no spiritual penetration, no understanding of mental and moral reality. Without the agreement and unification of our mind with the other mind with which it would enter into relation, it is impossible to have any kind of understanding, impossible even to begin to notice or perceive anything which may come into another mind. Every spiritual relation, every communication between our own inner reality and another's, is essential unity. . . . What is the meaning of this unity? What is this fellow feeling which is the essential condition of all spiritual communication, of all knowledge of mind? It is quite different from the kind of unity which we feel when, for example, we touch a stone, altogether different in kind from the knowledge of simple nature, of what we call material nature. We find a need to be unified with the soul we would know because the reality of that soul consists in being one with our own soul; and that other soul likewise cannot meet in our soul what is not essentially its own subjectivity."

But, we may ask, do these well known facts of our human relationship justify the tremendous conclusion that the "transcendental ego," the immediate centre of activity and experience, of each one of us is one and the same? Surely, if we admit Gentile's valuable contention that the subject of experience is an activity, a process, not a relatively static, spatialised thing, then that is sufficient to explain the differences to which he has pointed between our efforts to know a spiritual reality and the kind of unity we may achieve with it and, on the other hand, our effort to know a stone and the kind of unity we achieve with it. Material reality is relatively static, given in its entirety, its past and its future to be inferred from its present. A spiritual reality is dynamic; it is a creative pulse of the universe. It is only by an act of sympathetic intuition in which as Bergson would say, we place ourselves in the flux

of duration, in the active process of that other mind, and live that other spiritual reality, that we understand it. But that does not mean that in our "transcendental" nature, that is, as immediate subjects of experience, we *are* that other reality. The very fact that our finest intuitions never give us a complete understanding of that other mind should be sufficient in itself to indicate that the unity achieved in this act of intuition is only one of sympathy, not of identity.

It is not these slender psychological considerations, however, that have led Gentile to the adoption of his doctrine. It is rather the exigencies of his attempt to formulate an Idealistic Monism free from the difficulties in which Berkeley left the theory and avoiding the unsatisfactory epistemology of Kant. It must be remembered too, that it is only of the "transcendental" ego that this unity with all spiritual reality is affirmed: "Applied to the empirical ego," he says, "the doctrine is meaningless. Empirically I am an individual and as such in opposition, not only to all material things, but equally to all the individuals to whom I assign a spiritual value." Still more important it is to realise that this "transcendental ego" is, for Gentile, not a thing or a substance, localised in time and place, but a constructive process which is one and infinite. "Nothing but the constructive process *is*. The process is constructive of the object just to the extent that it is constructive of the subject itself." "Mind," he says again, "according to our theory, is act or process not substance. . . . Mind has no existence apart from its manifestations; for these manifestations are according to its inward and essential realisation." Mind, that is, is process; it is not a structure. Structure belongs to nature which is the antithesis of mind.

Recent psychological developments, I believe, support this essentially dynamic theory of mind. But we cannot follow Gentile in his contention that the individual mind, considered thus as "pure act," is infinite, nor do we find his argument here at all convincing. "Whatever effort we make to think or imagine other things or other consciousnesses outside our own consciousness, these things or consciousnesses remain within it, precisely because they are posited by us, even though posited as external to us." This, however, only proves that we cannot know or think of anything which is outside our minds while we know or think of it. It does not prove that mind is infinite, i.e., that no reality exists outside it. This concept of the infinity of mind can only be rendered valid by regarding all individual minds as ultimately one in a supra-personal mind. This Gentile does, but his argument does not prove it. Further, it is extremely diffi-

cult to conceive the unity of this universal mind if each individual mind is to be regarded as a unit. Gentile realises this difficulty but believes its solution is found in his concept of mind as pure process or development, for development, he points out, implies both unity and multiplicity. The unity of each individual mind he seems to regard as the unity of one process, integrated with a multiplicity of processes, forming an essential part of the warp and woof of the whole, and therefore in touch with or focussing the whole, and in that sense infinite. Thus the individual process and the total process are both a unity and are both infinite, though, as Gentile does not sufficiently clearly point out, the unity and infinity of the individual are both somethig very different from the unity and infinity of the whole.

But if mind is pure process and is the ultimate reality, what of material nature? "Space and time," says Gentile, "are the two systems of the manifold," the "multiplicity" required by the fact that mind is "development." They are, it appears, the forms in which the universal thought process sets itself out. "Time is the spatialisation" (the setting out in space) "of the unity of space." "We cannot fix this multiplicity before us, neither in its whole, such as it is, nor in any of its parts. From beginning to end it is multiplied into a multitude of images of its whole or of its part, and so is prolonged into the past or into the future. In every case then we have a multiplicity and a multiplicity not unified. This . . . is the whole content of our concept of space and time." That process which is reality, therefore, argues Gentile, must be spatial and temporal for otherwise we must regard the multiplicity as absolutely independent of every synthetic unity and, further, since that process is mind, it is impossible to conceive of a world of space and time existing before mind and independently of mind. "The forms of space and time are neither antecedent nor consequent. If the forms are the functions by which the object of experience is constituted, their activity and effective reality can be no where else but in experience. Space and time are inconceivable as empty forms which have to be filled, as one would fill an empty vessel with single presentations of sensible experience." We, then, are not in space and time, but space and time, whatever is unfolded spatially and has successive stages in time, are in us. But the "us" which is here intended is not the empirical but the transcendental ego. It is not meant that space is located in us. It is important to make this clear. The ego is not the space in which space is, meaning space as we commonly understand it. Space is activity; and for what is spatial to be in the "I," means that it is spatial in virtue

of the activity of the I," that its spatiality is the explication of the actuality of the "I."

From this doctrine of space and time the immortality of mind immediately follows. Mind is infinite in regard to space and time, i.e., it is immortal. But this immortality belongs not to the empirical ego, to you and me in our separate individuality and distinction from each other, but to you and me in our transcendental oneness with each other and with the universe. "The conclusion is," says Gentile, "that if we think of ourselves empirically as in time we naturalise ourselves and imprison ourselves definitely within definite limits, birth and death, outside of which our personality cannot but seem annihilated. But this personality through which we enter into the world of the manifold and of natural individuals, in the Aristotelian meaning, is rooted in a higher personality, in which alone it is real. This higher personality contains the lower and all other empirical personalities, and as this higher personality is not unfolded in space and time we cannot say that it is before the birth and after the death of the lower, because "before" and "after" applied to it would cause it to fall from the one to the many, and by destroying it as the one we should thereby also destroy the manifold. But this personality is outside every "before" and "after." Its being is in the eternal, opposed to time which it makes to be." "The only immortality therefore of which we can think is the immortality of the transcendental 'I'—not the immortality of the empirical individual 'I.'"

Gentile's doctrine of freedom also follows from his general theory of mind. Since the ultimate reality is mind and is one and infinite, and since mind is pure activity, there can be no condition of that activity outside the activity itself. It is, as Gentile says, "the Unconditioned which, in being necessary is free." "Freedom," he says again, "is absoluteness (infinity of the unconditioned), but in so far as the absolute is *causa sui*. *Sui*, we must notice, supposes the *self*, the subject, the self-consciousness, whence the being caused is not an effect, but an end, a value, the term to which it strives and which it gains."

To such views determinists have usually replied that to posit such an "unconditioned" as the ultimate decisive factor in either the activity of the individual or the process of the universe, is to reduce that activity or process to chaos, to depict it as given over to chance. This objection Gentile does not specifically consider, but the few last quoted words of his suggest a position which provides an answer. This unconditioned activity is not given over to chance for it pursues ends; that which it causes is "not an effect, but an end, a value, the term to which it strives and which it gains."

But what, ultimately, are the ends, or the end, which Mind or the Universe pursues? Gentile's answer to this question, an unsatisfactory answer, is found in his discussion of the problem of evil. It is here that the real difficulties of his doctrine begin. We must ask *why* mind realises itself in activity *in the way that it does.* The "being" caused in this activity, says Gentile, is an "end," a "value." Why then does the activity include the realisation of pain, and how, if all reality is the activity of one mind, do evil and error arise?

In answer to such questions as these, Gentile develops a theory of pain, error and evil as the necessary antithesis to the "dialectic," process, or "thesis" of mind. "Mind," he declares, "fulfils its own nature in so far as this is not already realised, and is in process of realisation. And hence mind finds itself always confronting itself as its own negation. Hence, too, the providential pain which spurs us on from task to task, and which has always been recognised as the inner spring by which the mind progresses and lives on condition of progressing." For "what else is pain but the contrary of the pleasure which for each one is the proclaiming of his own nature?"

As with pain, so with error. Mind "is not already posited, but is the positive which posits a process of self-creation which has as its essential moment its own negation, the error opposed to the true. So there is error in the system of the real in so far as the development of its process requires error as its own ideal moment, that is, as a position now passed and therefore discounted. Prove any error to be error and no one will be found to father and support it. Error only is error in so far as it is already overcome, in other words, in so far as it is our own concept's non-being. Like pain therefore it is not a reality opposed to that which is mind; it is that reality but looked back on as one of its ideal moments before its realisation."

"What we have said of theoretical error applies equally to practical error or moral evil . . . The true *conceptus sui* is that world self-consciousness which we are not to think of as an abstract philosophy (contraposed to life), but as the highest form of life, the highest peak to which, as mind, the world can rise." "When once the concept of reality as self-concept is understood, we see clearly that our mind's real need is not that error and evil should disappear from the world, but that they should be eternally present. Without error there is no truth, without evil there is no good, not because they are two terms bound to one other in the way that Plato said pleasure and pain are bound together (follow up either and you come to the other) but because error and evil are the

non-being of that reality, mind, the being of which is truth and goodness. Mind is truth and goodness, but only on condition that it is making them in conquering its own inner enemy, consuming it, and therefore having always the need of conquering and consuming, as the flame needs fuel. A mind which already is mind is nature."

We will try to make this argument clearer by stating it in another way.

Pleasure is always the accompaniment of activity in so far as that activity is the complete and unhindered expression of the self. Pain is the result of the hindrance of such active expression. The psychology of the instincts and emotions has proved these two points so far as pleasure and unpleasure are concerned. Even with regard to the *sensation* of pain it also seems to be true that it arises under those conditions which, in the history of the race, have so commonly resulted in the hindrance of the self-expression of the organism as to cause adaptations of the sense organs to bring about the sensation of pain whenever such conditions occur. All pain, both mental and physical (in the common usage of those terms), would seem then to be the result of the hindrance, directly or indirectly, of the self-expression of the organism.

But this self-expression of the organism is, on Gentile's theory, the activity of mind, or rather, the activity which *is* mind. It is mind in the process of realisation. Pain is therefore that mental activity, which is the only reality, hindered. But if that mental activity is the only reality, what can hinder it? The hindrance must come from within itself. This is precisely Gentile's point: "Mind fulfils its own nature in so far as this is not already realised." That which "is already realised," the activity which is past, is nature, human nature and physical nature. It is preserved as a concrete reality, as a necessary part of the present activity of mind, the very ground of that activity, though in no way determining it.

In that it is past and complete, however, it is the very negation of mind, which is pure act. It is therefore commonly a source of hindrance to mind. It is a concrete reality and a part of the activity of mind, but it is not mind, for mind is *pure* act, *free* act. The *total* activity is that which constitutes the *total* reality; nature, human and physical, is that part of the total activity which is really past activity preserved in the present; mind is that part of the total activity which is creative and free.

Because of this negation of itself with which mind finds itself always confronted, mind finds pain always present in the pleasure of its activity. Likewise error and moral evil are always present. Error ("theoretical and practical") "is not a reality opposed to that

which is mind; it *is* that reality, but looked back on as one of its ideal moments before its realisation"; i.e., "as a position now passed and therefore discounted." Without error there is no truth, without evil there is no good . . . . , because error and evil are the non-being of that reality, mind, the being (i.e., the activity) of which is truth and goodness." Therefore "our mind's real need is not that error and evil should disappear from the world, but that they should be eternally present." "Mind is truth and goodness only on condition that it is making them in conquering its own inner enemy."

Thus runs Gentile's theory. But it seems to me that a sounder psychological insight would have enabled him to make two distinctions here which would have saved him from this conclusion as to the eternal necessity of pain, error and evil. In the first place it is not true that the element of the past in the reality of the present is always a hindrance to the free, creative activity of mind. Often enough it is. If we regard, with Gentile, physical and human nature as the past activity of mind preserved in the reality of the present, then we may regard all pain as due to the hindrance of the present activity of mind as its present movement runs contrary to the laws of its movement fixed in the past. But on Gentile's theory it would seem that the *whole* of the physical universe should be painful in its presence to consciousness. This it decidedly is not. The movement of mind may run in harmony with the past and then the experience of contact with that fixed element within reality is pleasant. Gentile probably does not mean to contend that all nature is painful to us, though his statement of his doctrine would seem to imply it. If, however, he admits that it is only in so far as mind activity finds itself hindered by something contrary in the tendencies of reality due to its different activity in the past, then the *necessity* of pain no longer exists. It is only necessary for us to conform in our present activity to the past, i.e., to live in accord with the laws of nature, in order to avoid pain.

In the second place, the view of error and evil as merely negative, "the non-being of that reality, mind, the being of which is truth and goodness," is unsatisfactory. According to Gentile error and evil are ideal moments in the past activity of mind which have now been transcended and are included in present concrete reality merely as the static past on which the mind looks back and which in its activity it strives to overcome. But a truer psychology reveals those impulses which we regard as evil as a part of the positive driving activity of mind. Our consciousness of the Ideal is not the only element in the mind's activity. The "being" (i.e., the active process) of mind, says Gentile, is truth and goodness." But

no psychology can deny that instinct in its urgency is a fundamental activity of mind. It is an activity the direction or end of which is determined by the past, but only the exigencies of a philosophical theory could lead any one to deny that it is a real part of mind's activity. Yet this activity is often evil in tendency, i.e., it runs contrary to the urge of the Ideal.

It seems to be necessary, therefore, to modify Gentile's theory of mind as pure act to recognise that the activity of mind is not entirely free, but that it is partly determined by the relatively static past, by the automatic processes set in motion in earlier activities inherited from earlier generations. These tendencies mind, in its highest and latest developed activities, may strive to overcome, and in so striving may modify them and perhaps draw them into subservience to its higher ends. Thus evil should be regarded, not as something necessary to the process of the universe, an essential counterpart of good, but as the result of tendencies left by earlier processes of mind now frequently requiring to be transcended. It is something, therefore, which may be progressively overcome and even eliminated, for the good still remains good so long as evil remains, as on this view it always would remain, as a possibility which the activity of the spirit in pursuit of the Ideal may prevent from becoming actual.

Gentile's monism is too rigid. The theory of mind as pure act is, I believe, valuable, especially when one recognises, as Gentile does, that that activity is directed toward ends. The difficulties of the theory arise from his attempt to unify all individual centres of end-consciousness, pure activity, or mind. That attempt makes it impossible to give an explanation of evil which squares with experience and leaves us with no more rational view of the ends which are the dynamic of all activity than the picture of the universe as under perpetual necessity of sparring with its shadow.

Note.—All the quotations in this article are taken from Wildon Carr's translation of Gentile's "Theory of Mind as Pure Act."

THE ETHICS OF ADVERTISING.

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IN this article it is proposed to discuss very briefly the ethics of advertising, or the influence of advertising on standards of living. To this end it would seem well first to consider the question: What is advertising as a process? And secondly, the question: In what ways has advertising influenced standards of living?

1.—*Advertising as a Process.*

(a) In its genesis advertising is essentially a form of communication. To communicate is to establish between minds a relation of understanding. Primitively, this was first achieved probably by gesture, through which the object of interest would be indicated if present, imitated if absent. Gesture, or mimicry, was doubtless helped out by sounds imitative of the sounds emitted by the object which was the subject of communication. Gesture seems later to have been supplemented by picture-writing on the walls of limestone caves and on papyrus, and finally, by a system of spoken and written language symbols representative of the common or possible subjects of communication. With the advent of a complete system of language symbols, communication became partially independent of pictorial representation.

Now advertising is in series with these early forms of communication, especially perhaps with the pictorial form. Pictorial representation was one of the earliest and most easily apprehended ways of transmitting thoughts or meaning, and to-day, except perhaps for some of those few whose attention is almost wholly engaged in reflection upon abstractions, pictorial representation retains its very decided advantage as a means of penetrating to other minds. For the same reason, words which call up in other minds a startlingly clear image, are preferable to words of less pictorial significance.

Advertising, then, is but a special form of communication, evolved by civilised man from his direct or indirect knowledge of psychological laws. And, be it remembered, civilised man is not wholly different from primitive man, is indeed rather continuous with him, and the inheritor of a good deal of his irrationality and susceptibility. The point is, not to teach men how to advertise primitively, but how to advertise reasonably, justly, and decently, as well as efficiently.

(b) Now all communication of meaning implies the social idea. It implies one's fellows. It implies that each one of us is not merely an individual, but a socius; in short, that we are all one of another. And, of course, that is the truth. There are always at least two parties to any social relation, be this relation a contract or merely a conversation; and, as persons, these two parties possess equal rights. Where this fact remains unrecognised we have that fruitful and rather prevalent source of social bitterness, rank individualism, only another name for egoism. Here one of the parties is a party only in name, becomes, in fact, the mere means to the purposes of the other party; he ceases to be a person as far as that relation is concerned.

This denial of the personal status of one of the members of a social relation by the more powerful member, even where the denial has only been implied, has been present, for example, in the industrial world. Sometimes it has been the employer, sometimes the employee that has over-ridden the other. In both cases we have the denial of the social idea and consequent hurt to social harmony, whether intentional or not. Advertising has not been altogether free from this canker of individualism. It has often been a mere sham. In this case one of the members of the social relation concerned has been humbugged, tricked. There has been a pretence at recognition of his personal status and rights, but it has been a conscious pretence and a wilful deception. On the other hand, when the reputable salesman defines salemanship as "the selling of good goods at a good price in order that the transaction might benefit buyer and seller alike," and when he advises the beginner in salesmanship to make sure that the things he decides to sell are good things, honestly made and fairly priced, and that the firm he represents has a good reputation, then, in this definition and in this advice we find both parties considered and standards recognised. That definition and that advice savour strongly of obligation, for they insist upon a due recognition of the purchaser as well as of the seller. Indeed, one cannot imagine that any salesman, or any firm, could long hold a clientele or a market, unless through a reputation for honourable dealing.

(c) Next, all successful communication conveys information, or gives instruction. In the transmission of thought there is meaning or knowledge generated in the mind of the second party—generated, not conveyed. For we speak of transmission only metaphorically. Only if the other mind is capable of interpreting our pictures or our words does it apprehend what we wish it to realise. A child of the London slums interpreted a pot of growing ferns as "green feathers." Another child said that a rainbow was "like

pieces of ribbon sewn together and stretched across the sky." One and the same tree will mean so many superficial feet of timber to the timber-getter, the subject of a picture to the artist, a shady refuge to the weary and sun-scorched traveller. In short, every mind interprets by the aid of its own store of ideas, its dominant or pressing interests and needs. The advertiser must consider this fact, and we find therefore that one of the surest means of successful appeal is to represent one's goods in terms of some topical interest, common to all or most minds at the time, such as the visit of royalty, for example. Sometimes, this principle of advertising is crudely, even distastefully, applied, but it is one which cannot be overlooked. For attention must be captured and interest aroused before a sale can be effected. The problem of advertising is primarily one of arresting attention.

(d) It is clear, then, that the information, which by metaphor we speak of as being conveyed, may either exert an influence, or it may not. To be successful and exert an influence, an advertisement must be suggestive. Suggestion is a psychological process of great importance, for suggestibility means susceptibility, and therefore also educability.

The first principle of mind is consciousness, and consciousness, pragmatically viewed, is an awareness of and a sensitiveness to impressions, combined with a capacity for active response to the impressions received. For this reason, we can be played upon as on an instrument. External impressions, provided they arrest our attention, will pass in upon us, stir our interest, and then move on into action more or less modified by each individual's particular mental make-up or temperament. Merely to think of a thing with interest, as for example a woman thinks of a beautiful and costly gown she needs, is to render the idea very vivid and almost to guarantee its translation into action. Young people are being stirred daily by deeds which they see depicted on the screen, and daily they are re-enacting those deeds. Again, "the perusal of accounts of remarkable duels led two Italian boys, agen ten and eleven, to agree to fight a duel with canes tipped with sharpened steel ribs taken from an umbrella." ("Daily Telegraph," 18th April, 1911). This suggestibility is a characteristic of the human race.

Now, the suggestiveness of an advertisement may be due (1) to the advertisement itself, (2) to the person who contemplates it. Let us consider these two sources of suggestiveness.

(1) The advertisement to be suggestiive should have the qualities of concreteness, interest, intensity or massiveness, and prestige amongst others. By "concreteness" one means that the subject of the advertisement should be presented realistically. A great

advance in realism is noticeable, for example in pictorial advertisements. So successful has been pictorial advertisement that artists in line, in colour, and in window-dressing are in much demand. So great is the visual and realistic appeal that many thousands may be spent in this kind of advertising and yet it will pay. By "interest" one means that the advertisement must be both attractive of itself because of colour-design, or harmony, or contain reference to things of topical interest, or of special interest to the probable purchaser. By "intensity or massiveness" is meant that more or less overwhelming impression, which is produced by repetition of the suggestion, or by extent of space in the full-page advertisement, the poster, and the hoarding, or by the size and quality of the colour of the letters used. By "prestige" one means the power in reputation and character that is behind the advertisement of a man or firm whose commercial honesty is everywhere known to be beyond reproach.

(2) The person who contemplates the advertisement, on the other hand, is, other things being equal, the more suggestible to it the younger he be. A much more certain source of suggestibility than mere "age" is that of "need." In our needs we are vulnerable, and it is out desire to be decked out, for example, along with the value we place upon dress which makes us the prey of the shopman. I am told that some gentlemen are even in debt to their tailors.

It is our fellows who are suggestive to us, because of the native sympathy and common feeling which gregariousness generates in us quite unconsciously. Moreover, suggestion and sympathy issue automatically in imitation. Self-assertiveness is man's attempt to maintain himself against the pressure exerted by his fellows, by society; while self-abasement is his attempt to secure himself by yielding to that social pressure, i.e., by conforming.

This group of instinctive needs, centred round the herd instinct, would seem to give a fairly complete explanation of the power of "fashion," so important to the advertiser. One buys the same sort of things as one's fellows, first to *assert* oneself, to be equal to the best; secondly, to abase oneself, to avoid being conspicuous, to escape the inconvenient attention of the herd, which is ever ready to fall upon those members who do not conform; and thirdly, because of unconscious suggestion, leading to equally unconscious imitation. Assertiveness, submissiveness to avoid inconvenience, and imitation, are the three great links in the chain which holds man in bondage to fickle fashion. As we have hinted, it is due to suggestion and imitation that the best advertisement of goods is often the use of them by some well-known public person with pres-

tige, such as the so-called leaders of fashion, favourite actresses, and others.

In all this we have the reason why people are susceptible, why many a one buys what reason would forbid, buys sometimes even beyond his means. The advertiser who knows human nature in this sense, as a group of urgent needs, holds the prospective purchaser in the hollow of his hand. It is this weakness in humanity which seems to lay upon the advertiser an obligation, even while it hands men over into his power. For the power which lies in capable advertising may be used to delude as well as to induce and instruct. For this reason, honourable advertising requires that there should be recognised an obligation to push only "good goods." With this sense of obligation the whole activity of advertising becomes, as it were, legitimised, whereas without the sense of obligation it smacks strongly of deception and dishonour. The obligation, on the other hand, which rests upon the purchaser to know the value of what he is buying, and expressed traditionally in the injunction "caveat emptor," let the purchaser beware, hardly exonerates the advertiser from his duty to see that the goods are deserving.

In America many newspapers have the definite policy of rejecting certain undesirable classes of advertisement. For example, the "New York Times" rejects all unworthy or doubtful advertisements, and welcomes information from its readers which will assist it in keeping its advertising columns absolutely clean. The following are some of the classes of advertisement refused:—

1. Fraudulent or doubtful offerings.
2. Bucket shops.
3. Attacks of a personal character.
4. Large guaranteed dividends.
5. Offers of something for nothing.
6. Guaranteed cures.
7. Matrimonial offers.
8. Advertisements of fortune-tellers, palmists, etc.
9. Advertisement of suggestive books.
10. Objectionable medical advertising.
11. Offers of large salaries.
12. Wanted advertisements which request money for samples or articles.

We have said that it is in our needs that we are vulnerable. It is this weakness, this incapacity of ours to control and tame to the size of our pockets these many needs, of which the unscrupulous advertiser will take advantage. On the other hand, many of our wants are quite legitimate, and the satisfaction of them can but enhance our civilisation by the provision of objects more beautiful,

more useful, more economical of time, labour, and money. Where advertisement brings to the knowledge of men the existence and presence of such objects, it does humanity a service of a high order, advances civilisation, and raises the standard of living.

II.—The Influence of Advertising upon Standards of Living.

In general this commercial activity of advertising may influence human welfare either morally or materially. The skilful advertising which proves of disadvantage to the individual or to society as a whole, reduces the standard of living both morally and materially: morally, because of the bad faith involved, which enters like a poison into the social body; materially, because shoddy goods, however well advertised, cannot be substituted for good goods in the elevation of the material conditions of life. Let us first consider the effect upon morals.

It may truly be said, I think, that every case in which faith has been kept begets an accession of confidence, an assurance of good character and reliability. On the contrary, every case of broken faith induces a weakening of confidence, a deposition of good character, and an enervating sense of unreliability. The continuous and persistent practice of good faith breeds a moral atmosphere of fidelity and confidence: one is assured of the other's sense of social responsibility and respect for obligations. Whereas, even one lapse gives an indication of indifference to the claims of others, and starts the thought that the firm which breaks faith once may well be capable of doing the same mean thing in the future. For those who take long views, and who, like citizens of quality, genuinely place the highest good of society before mere personal profit, "time is not the essence of the contract," but rather fidelity and consideration.

Without the moral security of good faith, individuals and social groups feel themselves abandoned to the tender mercies of trickery and duplicity, deprived of that comfortable and allaying sense of assurance which is the moral analogue to financial credit, and quite as necessary. They would come then to experience the uncertainty and anxiety of one who has been delivered into the hands of persons callously indifferent to his social and moral rights, persons who, whatever their protestations, regard him in the last resort merely as a means of gain, as a sort of chattel. No modern purchaser, with his sense of personality as strong as an aching pain within him, can fail to notice the meaning of such treatment and feel resentful. The arousal of such feelings is obviously not good for society, and cannot possibly improve moral standards. In the

long run, it is not even good for business, as the history of commerce can prove. The traders who induce such attitudes and create such an unsatisfactory moral atmosphere are not good citizens, but really enemies to the civilisation and moralisation of man. For the provision of material welfare, while quite indispensable, is yet ultimately but secondary: material welfare borrows all its meaning and value from the fact that it is contributory to man's intellectual, moral and spiritual elevation. On the other hand, this higher life is impossible for him whose material welfare is insecure, demanding the whole of his attention, taming his spirit to the "muddy vesture of decay," leaving him no leisure for the pursuit of culture. We should not forget that material welfare is for persons, and that persons are minds, souls with possibilities of expansion. To refuse to recognise these possibilities is to treat a person as a means and not as an end, that is, to deny his personality, which is a social crime.

An actual example of the truth of the propositions we have just been advancing is, with few exceptions, the whole fabric of British trade relations. It may be that the Britisher is, as some of his enemies have asserted, merely shrewd and calculating in his commercial morality. For them the British trader is one who says: "Honesty is the best policy; I've tried both." Even that attitude, however, is better than one of dishonesty, unwarrantable cancellation of contracts, and failure to deliver goods up to sample. At least it shows worldly wisdom and a sane capacity to learn wisdom from experience. But I am not one of those who take this mean view of British commercial honesty. I am rather inclined to think that to the shrewdness of experience is to be added a real moral quality, a valuable legacy, probably, from that rigourous puritanism which at one time pervaded the minds and hearts of the people, and which, if it did tend "to take the joy out of life and the humanity out of man," yet also acted as a wholesome tonic against mere selfishness. On the whole, the British manufacturer delivers goods up to sample, keeps to his contracts, lives up to his advertisements, even if that means loss. It must be admitted that this moral quality represents at least security of trade and an assurance of high-class and durable wares. But does it not also tend to make the world better? Without being prudish, we may perhaps rejoice in that result of long years of commercial justice. Cherington, in his "Advertising as a Business Force," says: "It does not require the gift of prophecy to foresee the imminent coming of the time when the very highest possible standards of honour in advertising appeal will not merely be 'good business,' but will be absolutely

essential to any advertising appeal which can be expected to have any real effect." (p. 562).

Finally, we have to consider the material effect of advertising. The study of cultural anthropology is mainly of interest because of its progressive revelation of man's improving status. And what an incredible advance in material comfort and welfare it shows! It is unnecessary to draw a picture of the shivering, hungry, and foot-sore savage, his cheerless home and precarious existence, or to contrast that picture with another of civilised man, with his innumerable means of creating comfortable surroundings, his arrangements for lighting and heating, his more or less assured food supply, his multiplied means of transit, his enchainment of natural laws to his needs, his many sources of amusement, his vast possibilities of education, and his great political and industrial organisations. The fact of more special interest to us is that advertising has been an important factor in bringing about this enhanced condition of human life. As there has always been communication, so there has long been a kind of advertising. Stern limits, however, were set to it. The Phoenician could bring his wares to the ancient Briton, display them visibly, and barter them for ingots of tin. The cobbler could hang out the model of a shoe, and the barber set up his pole. But it was not till the invention of printing that any vast possibility of advertising arose. Then with the invention of the steam engine and its application to industry, the increased production required extended markets. The advertisement which printing made possible, then became necessary for the creation of a greater demand to use up the increased supply. "The cotton trade growth in the eighteenth and nineteenth centuries indicates that the first year of the introduction of steam into Great Britain saw a growth of 300 per cent. in the manufacture of cotton goods. The first railway built in England, between Liverpool and Manchester, showed an increase of 300 per cent. in one year, introducing another marketing problem in disposing of the large surplus over the previous production . . . . From that time continual improvement in the machinery of production, transportation, communication, etc., has increased the production of all classes of commodities and added thousands of new commodities to those already in use. The problem of disposing of these goods became, consequently more and more important. This all meant, and means to-day, an increasing selling (or advertising) problem."*

It is clear from this that advertising not only became a necessary factor in the economic problem of distribution, but that it

*Advertising: Its Principles and Practice. Tipper, Hotchkiss, Hollingworth and Parsons. (The Ronald Press Company, New York City, 1915).

must be regarded as a most important means whereby all the increased supply and all the new material goods of life reached the outposts of the world, there to bring comfort and relief. Further, man thereafter no longer remained on the almost animal level of the primitive needs of hunger, self-preservation, and sex, but was able to fulfil other needs of his nature previously left unsatisfied, and to develop new needs previously non-existent or merely latent.

It would seem not incorrect to say, then, that advertising has assisted to draw out the latent possibilities in human nature, has assisted in its evolution to some extent. For the development of new needs means the leading of a more complex and a fuller life. And this added complexity and fulness of life is a challenge to thought and reflection: we become overwhelmed by increasing complexity in the conditions of life unless there comes a corresponding increase in the intellectual capacity to meet the problems arising from that complexity. Furthermore, many of the new needs were higher needs. Musical instruments, fabrics, furniture, pottery in their highest forms offered greater access to beauty, while other new productions provided greater cleanliness; others again, were time-saving and labour-saving devices which tended to reduce the daily grind, and to add to the length of the period of leisure with its amenities so distinct from the conditions of existence of mere animals. The pursuit of science, which has led to the discovery of the operation of natural laws and to the technical mastery of nature, has produced commodities and devices, the loss of which would now, after we have known them, make life almost unendurable. It would be a long task to try to enumerate the many benefits which advertising has brought into our homes and lives, or to endeavour to trace out the all permeating influence they are having upon the human mind and upon its outlook and general well-being. The life of men is fuller and their bodies healthier since advertising came to acquaint them with possibilities which without it would have remained impossibilities.

Advertising is teaching. It has been, in its better forms, a factor in the education of man. Advertising may go wherever newspapers and the mails can go. Distance and the great spaces of the world are now no barrier to it. It is a mighty power to wield for good or ill, and it is sincerely to be hoped that those who wield it, will use it with discretion, honour ,and a due sense of their responsibility to society. "Men desire first to live and afterwards to live well," once said Aristotle. Responsible advertising has assisted men to live well.

SOME TESTING OF PHYSICALLY DEFECTIVE AND OF MENTALLY DEFECTIVE CHILDREN.

By C. R. McRae, M.A., Ph.D., Lecturer in Psychology, Teachers' College, Melbourne.

A.—THE BINET-SIMON TESTS AND SPEARMAN'S PRINCIPLES OF COGNITION.

1.—*The Problem.*

SINCE Binet first achieved his phenomenal success by the simple procedure of ignoring current psychological theory, the science of mental testing has made considerable advances, but mainly in a stumbling and trial-and-error fashion. Extraordinary activity in this field made some advance inevitable; an almost entire absence of underlying principles made much stumbling and wasted effort equally inevitable. For if theory which is not borne out in practice is useless, even pernicious, practice without theory is necessarily blind.

Theories as to the nature of "intelligence" have of course not been wanting; rather have we been suffering from an embarras de richesse. But while every psychologist had his own theory and was prepared to defend or even prove it, in theory, the mental tester with the courage of his convictions, with a theory which was his guide and principle in inventing actual tests, was extraordinarily difficult to find.

On the ground of incompatibility Binet effected a divorce between practice and theory, since when they have flourished unhappily apart. Meantime we have been awaiting the advent of a psychologist capable of bringing about a reconciliation, so that the story might end in the good old way, "they lived happily ever after."

2.—*A Possible Solution.*

A possible solution of the problem would appear to be offered in Spearman's Principles of Cognition, set out in his book, "The Nature of 'Intelligence' and the Principles of Cognition." Of particular importance are the second and third of the noegenetic principles, concerning the eduction of relations and the eduction of correlates. It will be remembered that they are formulated by Spearman as follows:—

(2) "The mentally presenting of any two or more characters tends to evoke immediately a knowing of relation between them." ("The Nature of Intelligence," p. 63.)

(3) "The presenting of any character together with any relation tends to evoke immediately a knowing of the correlative character." (Ibidem, p. 91.)

It would seem probable that we have here the ultimate principles capable of effecting the desired reunion of theory and practice. The failure of other theories when put to the test of practice is explained by the fact that the analyses have not been sufficiently ultimate. It seems likely that Ebbinghaus's Completion Test is a satisfactory mental test not because "intelligence" consists in "combination activity," but because the performance of the test is mainly a matter of educing novel correlates; that the "opposites" test is a satisfactory mental test not because "intelligence" consists in "seeing differences," but because the performance of the test is essentially a matter of educing relations.

3.—*The Suggested Solution Put to the Test.*

It was decided to try out these noegenetic principles in practice, to find to what extent their promise of a solution of the difficulty is fulfilled.

On the basis of these principles there was first of all made an a priori analysis and criticism of the component tests of the Stanford Revision of the Binet Tests. Concerning each individual test, the following questions were asked:—

(1) Does this test essentially involve the eduction of relations or correlates, or both?

(2) Are the material and form of the test the best obtainable for testing the subject's ability to educe relations and correlates of this order?

(3) Are the material and form of the test of such a nature that, as near as may be we are testing these eductions, and them only, for the first time?

By the use of these questions it was found possible to make a theoretical division of the tests into 4 classes, i.e.,

(1) Those to be retained.
(2) Those to be retained.(?)
(3) Those to be rejected.(?)
(4) Those to be rejected.

This analysis made, it was necessary to devise a means of testing its validity in practice, i.e., of obtaining a practical measure of the relative usefulness of the various component tests which might be compared with the decisions arrived at by the purely theoretical analysis.

It was thought that such a measure would be afforded by testing both mentally defective and physically defective children. The physically defective children would be at least within the limits of what may be termed normal innate ability, and suffering mainly from lack of schooling, while the mentally defective children would

have more or less normal schooling, and be suffering solely from ascertained mental defect.

Then the most satisfactory tests of innate ability should be those in which superior natural endowment enabled the physically defective children to furthest outstrip the mentally defective children, despite inferior educational opportunity, while the least satisfactory tests would be those in which superior educational opportunity enabled the mentally defective children to approach nearest to the physically defective.

It will be seen later that lack of schooling is not the sole disability of the physically defective children from the mental standpoint, that mental efficiency is impaired by disease. However, if the physically defective children are scarcely of normal mental efficiency, they are certainly much more "intelligent" than the mentally defective, the difference being quite sufficient to render the above contrast valid.

The contrast from the point of view of schooling is equally valid, as the percentage attendance of the P.D. children tested was approximately 60, that of the M.D. children approximately 80.

The Stanford Revision tests were applied to 161 physically defective children, and to 244 mentally defective children, ranging in age from 7 to 14 years.

For the various year-scales thus used there were then calculated:—(1) the percentage of M.D. children passing each test. (2) The percentage of P.D. children passing each test. (3) The percentage difference between these two figures. With these results were compared those of the a priori analysis. It is manifestly impossible to give the results here in full detail. We may take by way of example the results of Year VIII.

Test 1.

This is the "Ball and Field" test. The subject is asked to trace a path whereby he would be sure to find an object lost in a circular enclosure, beginning from a definite point on the circumference.

This test evidently involves the eduction of a series of novel spatial relations, but is somewhat vitiated by the length of the preceding instructions—it is impossible to present the problem in a few words. It therefore does not comply with the second condition, and was marked in the a priori analysis—"to be retained?"

Thirty per cent. of mentally defective children passed the test, and 43% of physically defective. The percentage difference between these figures is 43, comparatively speaking not very high, and when taken in conjunction with the fact that the percentage of

passes made by physically defective is so low, the result is such as to justify our a priori questioning of the right of the test to inclusion.

Test 2.

The subject is asked to count backwards from 20 to 1. If we can say that the great majority of children aged 8 can count to 20, and we surely can, then this test, with the novel application of the relation "backwards," is probably sufficiently noegenetic for this age. The a priori decision was to retain it. 44% of mentally defective children passed the test, and 77% of physically defective. The percentage difference between these figures is 75. Thus the theoretical decision to retain is amply borne out by the marked superiority shown by the physically defective children.

Test 3.

This consists of three tests of so-called "comprehension." "What's the thing for you to do (a) when you have broken something which belongs to someone else?(b) when you notice on your way to school that you are in danger of being late (c) if a playmate hits you without meaning to do it? The general idea underlying these tests would seem to be sound enough, but the choice of examples is not very happy. Without previous training, mostly moral, it is probable that no child of 8 years could educe the necessary correlate in the examination room; with a little previous training the dullest child would reproduce, not educe, the correlate. In the theoretical analysis it was therefore decided to reject all three examples.

Fifty-one per cent. of mentally defective children passed the test, and 58% of physically defective children. The percentage difference between these figures is only 14. Thus the a priori decision to reject is justified by the slightness of the distinction shown by the test between the two groups of subjects.

Test 4.

The subject is asked to state similarities between common objects, e.g., "in what way are wood and coal alike?" The test complies with all three conditions. There is a relation to be educed, and the operation is almost perfectly isolated and uncomplicated by extraneous factors. It was therefore marked "to be retained." 28% of mentally defective children passed the test, and 60% of physically defective. The percentage difference between these figures is 114. Thus the theoretical decision to retain is amply borne out in practice.

Test 5.

The subject is asked to define common objects in terms superior to use. There is clearly little of noegenesis in this. Statements in the form of genus and differentia are essentially a school product. In fact, to define in terms of use is probably the most intelligent procedure. The test was rejected in the a priori analysis.

Thirty-two per cent. of mentally defective children passed the test, and 43% of physically defective. The percentage difference between these two figures is 34. Thus the a priori decision to reject would seem to be fairly well justified by the relatively small percentage difference and the low percentage of passes made by the physically defective children.

It is perhaps unnecessary to give any further detailed examples of the close agreement between the theoretical judgment made on the basis of the noegenetic principles and the practical decision obtained by testing mentally defective and physically defective children. Although the practical testing did not, in all cases, bear out the theoretical finding, there was a very large measure of agreement. Concerning some 40 of the tests the data was reasonably complete, and for these 40 the co-efficient of association between the a priori judgment and the practical judgment proved to be .89.

Conclusion.

It would then seem tolerably clear that we have, in these two noegenetic principles of cognition, the most accurate theoretical criterion of the value of mental tests, and the most trustworthy standard according to which new scales of tests may be built.

The experiment surely indicates that certain tests are of value not because they are "opposites" or "completion" tests, but because they involve the eduction of novel relations and correlates, while other tests are of little or no value not because they are "vocabulary" or "number mastery" tests, but because they do not involve any such novel eductions, or because the quantitative principle of retentivity plays too great a part.

Whatever "intelligence" may be it most clearly manifests itself, and may be most accurately measured in processes which involve the eduction of novel relations or correlates, or both.

B.—PHYSICAL DEFECT AND MENTAL EFFICIENCY

Mr. Hugh Gordon, in a pamphlet published in 1923,* gave the results of mental testing carried out among physically defective children in London special schools. Gordon found that the average mental ratio of these children according to the Stanford Revision

*"Mental and Scholastic Tests among Retarded Children."

of the Binet-Simon Tests was 85.5, and attributed this low figure almost entirely to defects in the tests, to the dependence of the tests upon school training. He considered that the physical defects themselves had little or no direct effect, but "that the physical defect in the majority of cases has had a marked influence in reducing the amount of schooling and that through this reduction it has also had a corresponding effect on the mental ratios."

Our present purpose is to question the validity of this conclusion. The evidence is derived from the results of examining children in metropolitan schools for the physically defective, and patients in the Lord Mayor Treloar Hospital at Alton, Hampshire.

In London 117 subjects were examined. These included all children of two special schools who were over the age of 9 years and under the age of 14 years. The average was 11.13 years.

At Alton 62 subjects between the same two age limits were examined. The average age was 11.85 years. This group was unselected, and included most of the children of that age who were then in the Hospital.

The mental test used in most cases was the Stanford Revision of the Binet-Simon Scale. For the purposes of another experiment, 36 of the Alton children were examined with Burts Revision.

The following table summarises the results:—

	Special Schools	Alton Hospital
Number of Cases ..	117	62
Average Age	11.13 years	11.85 years.
Average Mental Age ..	9.18 years	10.71 years
Average Mental Ratio ..	82.5	90.4

Between the results of the two groups of children there is then an appreciable difference. The London children show a retardation of 1.95 years, the Alton children of 1.14 years.

If the Alton children showed an "intelligence" only equal to that of the London children, their mental retardation would be 2.07 years. Actually it is 1.14 years. Our object is to account for this difference of almost a year.

Four possible solutions present themselves:—(1) The heredity of the Alton children may be superior to that of the London children, in which case the above difference would be accounted for in terms of differences of innate ability. (2) The Alton children may have enjoyed superior educational opportunities. (3) The physical defects of the Alton children may be less serious than those of the London children. (4) The English Revision of the Binet Tests may be easier than the Stanford Revision, in which case the fact that over half of the Alton children were examined with the

English Revision would in large measure account for the difference noted.

We may consider these suggested solutions in turn:—

(1) The only criteria available for making a comparison between the heredities of the two groups of children are the occupations of the parents, and, in a few cases, their wages. In many cases not even the occupations could be ascertained, and even where it is ascertainable the criterion is only an approximate one. However, probably sufficient evidence is available for a rough comparison. The following table summarises briefly what information we have.

Parent's Occupations.

Occupation	London	Alton
Skilled Trade	56%	41%
Unskilled Labour	42%	54%
Professional	2%	5%

For each group of children the occupations of about 70% of the parents were ascertained.

Despite the paucity of information, it may probably be quite safely concluded that if any distinction is to be drawn between the two groups of children in this matter of heredity, it will not be in favour of the Alton children.

(2) If the higher average mental ratio of the Alton children cannot be attributed to superior heredity, still less can it be attributed to superior educational opportunities. At the metropolitan special school at which most of the testing was done, the average percentage attendance for 1923 was 77%, while the average percentage attendance for 64 of the children, from the age of 5 years, proved to be 62%. On the other hand, the average percentage attendance from the age of 5 of the children at the Alton Hospital proved to be 51%. Further evidence as to the lack of schooling of the Alton children is afforded by the fact that, whereas their average mental ratio was 90.4, their average scholastic ratio was only 80.6. Since the Binet Tests are admittedly largely influenced by schooling, we should expect the Alton subjects to score lower, not higher, than those in special schools.

(3) The third suggested explanation is no more feasible. The physical defect of the Alton children, far from being less serious than those of the children in London special schools, has undoubtedly been far more serious. Most of them were at the time of testing confined to bed; all had been seriously affected by tuberculosis, while in the majority of cases the disease was still active.

Gordon found that those children in London special schools whose defect was tuberculosis, scored lower in the tests than the

average physically defective child. Our own results show the same tendency, and Tredgold regards tuberculosis as one of the predisposing causes of mental defect. For these reasons again, therefore, the Alton children might be expected to show an average mental ratio lower, not higher, than that of the London children.

(4) The fourth suggestion was to the effect that the apparent superiority of the Alton children might be only apparent owing to the fact that over one half of them were examined with the English Revision, while all the London children were examined with the Stanford Revision. A superficial examination of the two scales would suggest that herein lies the real explanation. It would take an undue length of time to consider here the relative difficulty of the two revisions; it must suffice to state briefly that our own results indicate quite definitely that the two scales are, for physically defective children at least, of almost exactly equal difficulty.

We have then considered and been obliged to reject all four suggestions. The higher average mental ratio of the Alton children is inexplicable in terms of social environment and heredity, of the nature of the physical defect, of educational opportunities, or of a difference in difficulty between the two revisions of the tests. On the other hand, the nature of their physical defect, their educational opportunities, possibly also their social environment and heredity, would tend to make the average mental ratio of the Alton children lower, not higher, than that of the London children.

One explanation alone seems feasible, that the alleviation brought to the physical defect by the medicinal measures and environmental conditions of the Hospital stimulates the mind as well as the body.

There can be little doubt but that, were these children in their own homes, their mental ratios would be as low as, if not lower than, those of urban children in attendance at special schools for the physically defective.

J. Argyll Campbell, of the National Institute for Medical Research, found, on examining patients at Alton, that "their metabolism on the average was increased 40 per cent. above the standard, for the same weight, of children confined in a closed calorimeter." (Br. Medical Journal, Feb. '22). As a result of this raising of the metabolism, the working of every part of the bodily engine is enormously "speeded up," and the brain, the organ of the mind, must participate in the "speeding up." Such a great increase requires naturally the most careful watching. As Dr. Jones, resident physician at the Hospital, expressed it to the writer: "It may be the case of attaching a Rolls-Royce engine to a Ford chassis. The chassis shakes itself to pieces." But within the limits of safety,

this "speeding-up" of all bodily functions, including those of the brain, must have a great and beneficial effect. In correspondence with the writer, Dr. Argyll Campbell wrote: "Our own observations proved that the muscular tone and general metabolic changes were markedly improved by the sun and open air. One would expect mental improvement to occur with this." Sir Henry Gauvain, medical superintendent at the Hospital, is inclined to invoke as explanation of the mental superiority of the Alton children the setting free from the skin by ultra-violet rays of certain organic compounds which are essential brain foods. Whatever the true explanation may be, it would appear tolerably certain that physical defect, if widespread and of long duration, simulates the symptoms of some degree of amentia, and that these symptoms may be removed by such treatment as is afforded at the Treloar Hospital. Nor indeed does this conclusion seem unnatural. For it is surely true that "man is not to be conceived as Descartes conceived him, namely, as an automaton plus a soul, nor as Epictetus put it, 'a ghost in a corps.' He is, through and through, a single organism, a 'body-mind.'"* Then if man is not a body and a mind, but a "body-mind," not two things, but one thing, a bipolar unity, but a unity nevertheless, it is surely natural that inefficient functioning of one pole will be accompanied by, will be the cause of, inefficient functioning of the other pole. This would appear to be the case with the children tested in the metropolitan special schools. Nor is it unnatural to expect that the improvement of the functioning of one pole will be accompanied by a corresponding improvement of the other pole. This is apparently the case with the Alton children. The raised metabolism and general improvement of bodily tone due to fresh air and exposure to sunlight and artificial "light" express themselves not only in greater physical well-being, but also in increased mental efficiency.

*T. P. Nunn, "Education: Its Data and First Principles," p. 18.

SLEEP AND MUSCULAR WORK

THE EFFECT OF SLEEP ON THE ABILITY TO PERFORM MUSCULAR WORK.*

By R. F. Fortune, M.A., Psychology Laboratory, Victoria University College, Wellington, N.Z.

IT is known from the work of Kohlschutter, Mounninghoff, Peisbergen, Michelson and Howell that the intensity of sleep varies greatly in any given night. Michelson found, for example, that in awakening his subjects by dropping a brass ball on to a metallic surface it was necessary to make the height from four to five times greater after one hour's sleep than after three hours' sleep. Howell used an electric current of varying strength as a stimulus for awakening himself and found, in agreement with the other investigators, that the intensity of sleep mounts rapidly in the first hour or two, falls equally rapidly immediately thereafter, and then falls slowly from a comparatively low level for the last five hours in a night of eight hours. (1) Sante de Sanctis and U. Neyroz (2) using tactile

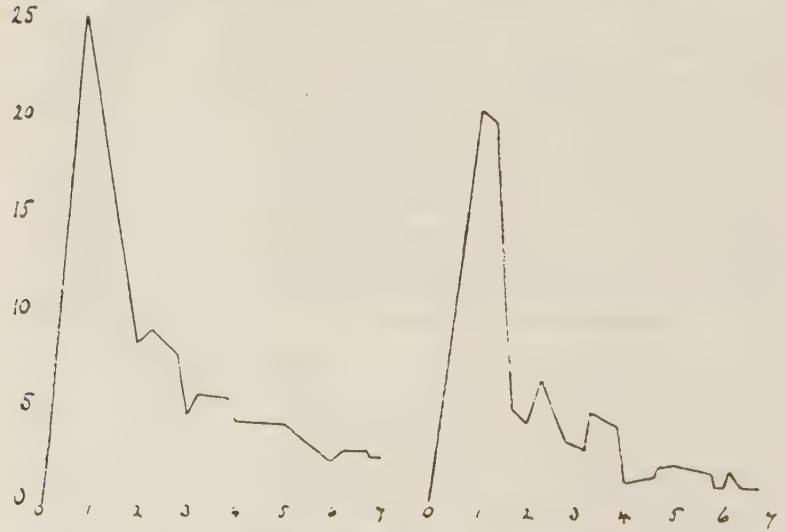

FIG. I.

Curve of sleep for two subjects. The numbers on horizontal lines show hours after falling asleep; the numbers on the vertical lines give the energy of the falling ball in thousands of gram centimetres, i.e., the weight of ball multiplied by height of fall. Taken from a reproduction of Michelson's results in M. de Manaceine's, "Sleep, Its Physiology, Pathology, Hygiene and Psychology," p. 33.

*The writer in indebted to Professor Hunter, Victoria University College, for assistance and advice in this research work.

pressure as the stimulus for awakening, found that the fall in intensity occurs in the first half of the second hour of sleep in disagreement with Kohlschutter, who places it within the first hour, and Monninghoff and Piesbergen, who place it in the third quarter of the second hour. Sante de Sanctis and Neyroz also report a lesser rise in intensity in some subjects towards the sixth or seventh hour. All investigators are agreed however, that the earliest period of sleep is the most intense; and the difference between the greatest and shallowest depth appears to be greater when an auditory rather than a tactile stimulus is used for awakening the sleeper.

The present investigation was undertaken primarily to determine whether the first three hour period of deep sleep increases the capacity for neuro-muscular work more than the following period of more shallow sleep. The apparatus employed was a Dubois ergograph carrying a weight of three kilograms. The index finger of the right hand was selected to lift the weight, and the distance it was lifted in each case was recorded by a pointer fixed in the carrier which traced the vertical path of the weight on to a revolving kymograph drum placed horizontally overhead. A control experiment during which no work of any kind was done showed that no fatigue from an earlier tracing supervened upon a later record taken three hours after. An alarm clock was used to secure awakening at the desired time. Tracings were taken immediately before sleep, immediately after three hours' sleep (except in two cases, after 2 hours, and 1½ hours respectively) and again on re-awakening. Nine complete records in all were secured. The following tables show the comparative work done, as measured by the distance in cms. that the weight was lifted before complete fatigue supervened.

TABLE I.

DATE	I. Before Sleep	II. After 3 hours' sleep	III. on rising	IV. On re-arising
4-5th Nov.	177 cms.	175 cms.	After 5 hours 211 cms.	
6-7th Nov.	183 cms.	188 cms.	After 7 hours 185 cms.	
7-8th Nov.	195 cms.	225 cms.	After 6 hours 229 cms.	After 8 hours 206 cms
8-9th Nov.	146 cms.	158 cms.	After 7¾ hours 188 cms.	
18-19th Nov.	339 cms.	288 cms.	After 7¾ hours 305 cms.	
21-22nd Nov.	310 cms.	309 cms.	After 10 hours 305 cms.	
29-30th Nov.	295 cms.	330 cms.	After 8 hours 363 cms.	

NOTE.—The hours of sleep quoted in columns III and IV are not hours of further sleep, but cover the whole period of the sleep of the night concerned.

TABLE II.

DATE	I. Before Sleep	II. After	III. After	IV. After	V. After
3-4th Nov.	194 cms.	After 2 hours 182 cms	After 6 hours 210 cms.		
14-15th Nov.	236 cms.	After 1½ hours 236 cms.	After 4½ hours 239 cms.	After 7½ hours 258 cms.	After 9½ hours 252 cms.

NOTE.—As before, the periods of sleep in the later columns are inclusive of the periods in the earlier.

The most surprising result was that, contrary to expectation, there was no invariable increase in muscular ability after sleep. The morning's work on the 7th November was little better than the work of the evening before; the morning's work on the 22nd November was slightly less than that of the evening before; and that of the morning of the 19th November was appreciably less than that of the night before. As well as the complete results for nine nights, incomplete results for four nights were obtained. All show an increase in the work done.

TABLE III.

Date	Before Sleep	After
5-6th Nov.	214 cms.	After 6½ hours' sleep, 224 cms.
10-11th Nov.	210 cms.	After 3 hours' sleep, 234 cms.
11-12th Nov.	197 cms.	After 9½ hours' sleep, 238 cms.
16-17th Nov.	280 cms.	After 9 hours' sleep, 301 cms.

Nevertheless the three exceptions in thirteen cases are sufficient to cast a grave doubt on the possibility of isolating fatigue as a unitary factor in any particular instance. I was certainly fresher on all the three mornings concerned than I had been the

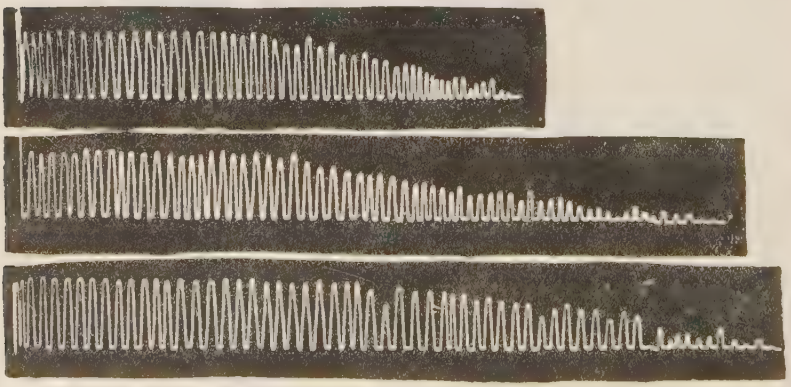

FIG. II.

Ergograph record of 8-9th November, 1925. Fig. A taken at 11 p.m. records a total lifting of the weight through 146 cms. Fig. B taken at 2.30 a.m. records a lift of 158 cms. Fig. C taken at 7.30 a.m. records a lift of 188 cms. There is a gain of 12 cms. in the first three hours of sleep, and a further gain of 30 cms. in the following period of 4½ hours' sleep. This result is taken to indicate the need for a purely psychological explanation of the greater intensity of early sleep.

nights before, especially since on the 17th and 18th November I had done an unusual amount of muscular work, having been over the hills on a fairly strenuous tramp. After returning on the 18th I had been at a friend's place till close upon midnight. It would seem that the excitement aroused by conversation after a two days' solitary tramp masked whatever fatigue resulted from the walking very effectively. The record was the highest obtained, morning, evening, or in between. It is known that in dreams emotion far more intense than that found during waking is common. A nightmare will leave the mouth dry and the tongue cleaving to the palate, a degree of emotion not usual apart from sleep. Such emotional disturubances must affect the record of work done and mask or accentuate fatigue according as the emotion may have an invigorating or an enervating effect or after-effect. In consequence of this unexcluded factor any single observation may not be significant of the rate of recuperation during sleep. Excluding the record of 18th-19th November, which is plainly influenced very greatly by the emotional factor, and excluding the last tracing of 7th-8th November, which also is unaccountable except as emotional after-effect, the six nights of Table I. show an aggregate increase of 79 cms. for the first three hours of sleep, and a further aggregate increase of 96 cms. for a further period of sleep averaging 4¼ hours.

The results of Table II also show that the greater part of the increase in the ability for work comes from the later period of more shallow sleep. It may be safely concluded that the increase in muscular ability with sleep is not unequally distributed in any regular manner, and on an average approaches an even distribution throughout the time of sleep. Depth of sleep does not appear to facilitate neuro-muscular repair. The very great lessening of the intensity of sleep after two or three hours' sleep (observable in my own case in that an alarm clock at my head was ineffective in waking me until such a period had elapsed) is not due to the greater part of the neuro-muscular repair of the night having been completed in the interval preceding.

A possible explanation of the early decrease in the intensity of sleep is thus shown to be untenable. It would appear that it is impossible to explain the psychological nature of sleep in terms of its biological end just as it is impossible to explain love between the sexes satisfactorily in terms of reproduction or hunger in terms of growth and sustenance. It may be, the classifications of William James, Thorndike, Lloyd-Morgan and McDougall (3) to the contrary, that sleep should be included in the system of the great primary instinctive dispositions; for like hunger and love it is very much more intense in the earlier stages of gratification, though not the

more effective in producing its biological end on that account. I am the more encouraged in this belief in finding that both Claparede(4) and Drever(5) have treated sleep as a primary instinct, though not specifically for my reason.

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NOTES BY THE WAY.

No. 2.

Science and Metaphysics.

Science has always been "metaphysical," as that term is understood by the Positivists. The Positivist has endeavoured to eliminate from science the metaphysical factor, as found in the concepts of Substance and Cause. He would have us substitute therefor the concepts of mathematical function and phenomenalistic law. The attempt has been sterile as method, and contrary to the whole spirit and genius of science. The scientist is and remains the metaphysician. The scientist wishes not merely to describe, but to explain. One substance, taking protean forms, and causing natural phenomena, is the real delight of his heart. Positivists are philosophers who try to tell the scientist what scientists ought to believe. But they succeed in doing little more than troubling the scientists' composure. They bluff him into saying in words that, of course, he is seeking *laws* not *causes*. They make him repeat after them that Hume has, of course, overthrown all the old nonsense about substances and efficient causes. But in his secret heart he believes it not. In his theorising he repudiates it. The more philosophically-minded a scientist is, therefore, the more he is torn within himself, and the more restlessly does he jump from one philosophy to another, from realism to phenomenalism, and pragmatism, and even idealism, and then back to realism again—ever back to realism. If a philosopher is lucky, he may get hold of one philosophy that seems to him good. But no scientist it quite equipped without a suite of three or four philosophies. When he finds things getting hot for him in one philosophy, he slips over into another. He may even brag about this inconsistency, and call it being common-sense and unmetaphysical.

PSYCHO-BIOLOGY AND DEMOCRACY.

I.—HUMAN NATURE, SCIENCE, AND SOCIETY.*

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Those who speak with understanding must hold fast to what is common to all as a city holds fast to its law, and even more stubbornly—Herakleitos.

THE President of the British Association for 1925 says that the quarters exhibiting suspicion and dislike for science are now political rather than ecclesiastical, being the centres of those social nd economic theories resting mainly on an emotional basis to which the habits of sober, accurate analysis promoted by science are apt to be unfavourable. And he indicates that such other criticism as science has encountered in its progress, on the score of failure to produce an era of prosperity and international reconciliation, is to be discounted by the fact that science is unable to improve upon human nature. Nevertheless, according to this authority, science tends (presumably without improving upon human nature) to increase the intellectual, material, and even the aesthetic possessions of the world.

It is with interest that one records this assurance from Scientific Headquarters of satisfaction with the attitude now prevailing on the part of the official representatives of religious interests towards science. Only philosophers appear likely to have any ground of complaint and that of no more general importance than merely of finding their occupation gone, for has not the question of the compatibility of Science and Religion formed the staple of philosophizing, that of the English-speaking world at least, for many years? And even so has not such an expert in this controversy as Lord Balfour declared that the only quarrel of a philosophic theist like himself with science was over its naturalistic representation of the world; the applications of natural knowledge to the relief of man's estate were wholly unexceptionable in their operation. From the very midst of the Tabernacle, however, a higher bid has lately been made. Thanks to the efforts of Dean Inge, Bishop Barnes, and other "protestants," Religion has been authorised to say that Science can keep its world as well as its works. There is a real world of Value, but it needs for its counterpart another world, a world of purely mechanistic Fact. A judicious blend of materialism and mysticism is the Religion of the Future. As we perceive, the offer is likely to be accepted. The

*Based on a Paper ("Psycho-Biology and Democracy") read at the Annual Congress of the A.A.P.P., Sydney, 1925.

lion of science lies down with the theological lamb and awaits—fortified, shall we say?—the oncoming of the social-democratic tiger.

This is all very comfortable for the time being, but it would appear that some parties are not satisfied even yet. There still remain some of the Old Guard of anti-theological scientists, like Mr. Bertrand Russell, to whom "the habits of sober, accurate analysis promoted by science" are a religion to be propagated, the only religion they know, and who hold that until these habits have been individually formed by men in the mass, the technical applications of science will, in the future as in the past, do more harm than good.

If this ostensibly new situation does not contain food—and work—for philosophy in the old sense, it is remarkably like one that does. The issue between the view which attributes intrinsic value to technology and that for which its value is only hypothetical is as deep as ever was that between the truth and the falsity of the naturalistic picture of existence. One's only doubt is of its novelty. Can a view of things whose practical outcome is invariably beneficial be false? Can theoretical principles the benefits of whose application to the uses of man are contingent on diversities of direction be wholly true? Indeed is it not the existence of such principles in human discourse that explains the doctrine of degrees of truth? Verily the need for philosophy in undiminished, and its opportunities by no manner of reckoning exhausted.

On the view now before us, then, that of science-*cum*-liberal theology, the value of scientific technique, though intrinsic, would be enhanced if, *per impossible,* science could improve human nature. On the other, that of anti-theological naturalism, the value of applied science would for the first time become positive if men became scientific in their thinking. For both views, then, natural science might become more useful to humanity on condition of some development or other in the character of mankind itself.

When it is said, however, that science cannot improve human nature, we want to know what precisely is meant by this impossibility. Presumably it does not mean that those who acquire scientific habits of mind are not improved thereby, so that an ideal like Mr. Russell's is not wholly excluded. But the argument seems rather to concern the case of those who make use of the technique provided by science, irrespectively of whether they themselves become "scientists" or not, and it seems simply to point out that to be assured of man's command over the uses of a thing does not give us such knowledge of the man himself as would justify us in expecting him always to make the right uses.

It is doubtful, however, if this somewhat elementary piece of formal epistemology conveys the full import of the situation. Something more would seem to be at issue than any recognition that the user of scientific results belongs, as a moral agent, to an order different from that of his technique. A further line of consideration, more congenial to the standpoint of naturalism, is strongly suggested. On this view we are concerned not, as Kant was, to emphasize the unique goodness of the good will, unique in its distinction from nature and from the knowledge of nature or the control of physical conditions, but to insist that the moral capacity of the human will is limited by an "original nature of man." Reason is, if not the slave, at least the prisoner of the passions. Nevertheless it is claimed that on this "firm foundation of unyielding despair" reason can, by submitting itself to the service of its gaolers, in turning its energies to the provision of means to their satisfaction, erect a tolerable prison house, not lacking even in "aesthetic" satisfactions for its own behoof. Whereas Mr. Russell's ideal would require for the welfare of humanity the achievement somehow of an entire reversal of the respective roles of "reason and passion."

While, then, it is possible that the President, when he says that science cannot improve human nature, means merely that science cannot undertake to improve human character since its business lies in another field, it is more probable that he is confusing this with the totally different proposition that the impossibility of improving human nature, by any means whatever, is a finding of natural science itself. Human nature is a part of nature at large, in nothing so much resembling its context as in its irreducibility. After all, a form of knowledge like natural science, for all of whose theoretical findings about things there is a complete alternative expression in terms of practical control of them, must of necessity comprise obstacles as well as facilities, constants as well as variables. Now human nature as an "obstacle" has its part in the yield of positive knowledge as the special contribution of Psychology, when that is developed as a "strictly natural science."

Contemporary psychology exhibits man as a thing of doubtful motives and limited intelligence. If this was suspected before, it is said now to be put upon a basis of scientific evidence. With psychology become a strictly natural science, there is now no longer the excuse there may have been once for entertaining "metaphysical" alternatives to this depressing conclusion. Away with such meanderings! "Facing the facts" is the attitude for modern men. Everybody who is anybody is doing it.

The "facts" in question have a variety of bearings. On the one hand the ends of human pursuit are found to be dictated by a

number of unitary "instincts," specific dispositions native to the organism. These ends, then, while wholly finite, are substantially unalterable, though the means of attaining them admit of enormous complication. On the other hand it is pointed out that man's capacity of achieving these his purposes is inherently limited. The necessary knowledge waits upon the deficiencies of human intelligence. This is so as regards the accomplishment of any one of man's finite purposes. But perhaps as a further fact, perhaps as merely another side of the same fact (the case is disputed), we must consider that the pursuit of one is constantly liable to be checked by the claims of some other; their capacity for harmonization is (also?) finite. These are the limitations of human nature in general, which is homogeneous while humanity as a collection is homœomerous. But still more important for the present argument is the consideration that the actual existence of these dispositions and these capacities in individual human beings is differential; they occur in finite proportions, fixed by heredity, even though all of them are present in each man in some degree. The whole position is thus represented by Professor Starch ("Educational Psychology," p. 26):—"Differences among human beings are quantitative rather than qualitative. That is, all human beings have the same reflexes, instincts, and capacities; all have the powers of perception, discrimination, attentiveness, reasoning and so forth. All persons, consequently have the same general qualtiative make-up. The variations from person to person are, therefore, primarily differences in the strength of the various abilities that each individual possesses, and in the manner in which amounts of the various traits combine in the same person. The differences are qualitative only in the sense that combinations of varying amounts of diverse traits occur."

As we have said, all this has been surmised before, but what distinguishes the present situation is the existence of the researches and results of medical psychology, the physiological or (*saltus per mirabilem*) "social" branch of which guarantees the statements about instincts, while the neo-pedagogical or "vocational" claims in the measurement of "intelligence" to have attained the status of an exact science. What of consciousness, or conscience, in all this, is it asked? Why, that is the penalty of the failure that comes of limited capacity. No really efficient person will waste his time upon this muttering and day-dreaming of the unfit which, for the true behaviourist, is consciousness. Though if he is extraordinarily efficient he may be able to afford the risk of indulging in those prettier forms of consciousness which men call artistic appreciation.

Statements like that quoted above may still read more like a programme that a fact, nevertheless (or perhaps we should say therefore) men are ready to persecute in their name. It may reasonably be pointed out by the modern psychologist that an obstacle scientifically determined is no longer merely an obstacle but something that promotes action. It remains an obstacle only in a sense that is shared by all the objects of all the natural sciences. As the word "natural" imples, they are all things whose characteristics we must respect if we wish to realise our purposes. But the "scientific psychologist" will go further and claim that he has came to terms with the last obstacle in the path of man's technological development. The claim was heralded by David Hume in his youthful "Treatise," in words that have become a classic of *Psychologismus*:—

"If therefore the sciences of mathematics, natural philosophy, and natural religion, have such a dependence on the knowledge of man, what may be expected in the other sciences, whose connection with human nature is more close and intimate? . . . In these four sciences, of Logic, Morals, Criticism, and Politics, is comprehended almost everything which it can anyway import us to be acquainted with, or which can tend either to the improvement or ornament of the human mind.

"Here, then, is the only expedient, from which we can hope for success in our philosophical researches, to leave the tedious lingering method, which we have hitherto followed, and, instead of taking now and then a castle or village on the frontier, to march up directly to the capital or centre of these sciences, to human nature itself; which being once masters of, we may everywhere else hope for an easy victory . . . There is no question of importance whose decision is not comprised in the science of man; and there is none, which can be decided with any certainty, before we become acquainted with that science."

To-day not only is this romantic conception of the possibilities of psychological science widespread, but equally so is the belief that their realization is well in sight. Thus when Professor Cattell writes that "the nineteenth century witnessed an extraordinary increase in our knowledge of the material world, and in our power to make it subservient to our ends; the twentieth will probably witness a corresponding increase in our knowledge of human nature and in our power to use it for our welfare," the subtle transition from "our ends" to "our welfare" bears evidence of just such an all-inclusive optimism. Professor J. B. Watson, indeed, after defining the task of psychology, as the prediction of human behaviour, and its control by organised society, goes on to point out that "psychology at present has little to do with the setting of social standards, and nothing to do with moral standards." Evidently, however, he regards the limitation as only temporary.

But if all this be so, the possible value of human nature in knowledge or action must be of the same character as that of nat-

ural objects in general, and their technical derivatives (if that be indeed anything different.) It is a value in use, a value under control. Hence the goodness of the good will is to be estimated by the same standards that apply to the usefulness of material things,* the ends to which it is instrumental are the same; they have the same source in human nature and are set in the same way. In particular, the goodness of the goodwill is revealed as something varying in degree from case to case, a degree wholly predictable, in the absence of its actualisation, simply from the degree in which the elements of human nature which constitute its potentiality are present in the given case.

It may be pointed out that one implication of all this, to wit that human nature sets the standards for its own control, argues a certain ideality in human nature itself. This is true, but it is an ideality to which a naturalistic psychology is of necessity blind. The best that such a psychology can do is to suppose that the operations under control and the control itself are carried on by two distinct persons, external the one to the other in their natural individualities. The picture of the human family or any less extensive community become scientific, which is presented from the purely external, that is, technological standpoint recommended as alone scientifically adequate by behaviouristic psychologists, is that of a clotted mass of mutual exploitation.

It would appear, then, that if the President of the British Association believes that despite the limitations of human nature science can still "increase the intellectual, material, and even aesthetic possessions of the world," science must take measures to include a psychological branch to tell us how to administer and manipulate human nature to the best ("material") advantage. Without this resource, the scientist would be in no position to defend such a claim against those who, setting morality in a sphere of its own distinct from nature and natural knowledge, argue that the provision of scientific devices fails to guarantee the moral development necessary to secure that they shall be employed to worthy ends. Nevertheless, whoever has the right to the dualistic position implied in that argument, the "scientific psychologist" at any rate has not. It is not open to him to suggest, as does Professor T. A. Hunter (this Journal, II. 53), that "Man's knowledge has outrun his moral direction; if we cannot develop both simultaneously we must mark time in the field of discovery until the moral forces have caught up."

*Note that the use of the word "material" by Professor Cattell and others in contradistinction to "human nature" is one to which they are clearly not entitled; it is antiquated without being classical. It is especially so from their psychological point of view. *Matter means mechanism;* there is no primary implication of extension in space.

The retort is obvious; *Que messieurs les psychologues commencent!* It will be found, however, that many of those who use this dualistic argument do not mean what they say. This is clearly seen when they proceed to attribute our moral backwardness to the dysgenic influences which they allege against modern civilisation. Surely a pessimism, however "outspoken" by profession or "gloomy" by repute, whose basis would confessedly be removed by the simple adoption of eugenics or birth-control, cannot be a pessimism of any great spiritual profundity. It is all a matter of manipulation, to ends purely "natural" or taken for granted.

What, however, would be the value of a world given over to the control of human nature on the lines reported by a psychology of this sort, and in what condition is such a world to be used as a criterion either of existing political institutions or of tendencies arising out of them, is another question, one which invites discussion, as does also that of the gain or loss to psychology that may have accrued by its adoption of the methods which have led it to occupy this position and to make these claims.

Meanwhile let it be observed that however little of an obstacle recent psychological methods may have rendered "human nature" to the proper utilisation by man of scientific discoveries, we are to understand that it shall remain, even under that treatment, as much of an obstacle as ever to "those social and economic theories, resting mainly upon an emotional basis" whose adherents do not like science. What are those theories? Presumably they include all the current projects usually grouped under the blanket term Socialism which profess by some means or other to render the democratic organisation of society more intensive and far-reaching. They may also be taken, perhaps, to include the various contemporary attempts to apply the conception of community to the solution of international problems, though empirically the advocacy of Internationalism is probably to be found more frequently on the lips of "scientists" than of "democrats." In general, however, it is the democratic principle or emotion in which it is held, we are led by a scientific survey of human capacity to see the most imminent dangers to society, and which it is the business of a scientific social technique to curb.

At this point it will doubtless be objected that the specifically democratic character of the schemes which have been cited is far from obvious. Nothing can be clearer than this, it may well be said, in the case of socialistic developments like Syndicalism, Anarchism, or Bolshevism. But again it will be pointed out in regard even to the more "constitutional" forms of socialist theory that Democracy is at any rate complete without them. All the

formal requirements of Democracy, it may be said, are fulfilled in states which exercise a minimum of statutory or departmental control over person, property, or contract. Something like this is no doubt true. Nevertheless, if the value of a system or idea is to be correctly estimated, we must consider its tendencies as well as the forms of its actual embodiment, perhaps its perversions as well.* The attack on emotional theories of society will never get home without impugning not merely socialist projects, but the whole democratic principle and its existing embodiments.

But while it is possible to make too much of the distinction crystallized for the time being in the opposition of the terms "political" and "social" democracy, it has, for what it is worth, an important bearing on the matter of our argument. That the former can exist in noticeable measure without the latter is significant of something fundamental in Democracy, namely that given human purposes are to be accepted as and because they are given. If, then, certain motives, usually classed as "economic," are allowed in actual communities to operate in a manner largely instinctive and unreflective, it is because they are the motives of the individuals concerned, of at least the majority of the members. Whereas in the more "advanced" schemes of social organization which have been mentioned there is implied a reflective or ethical revaluation and reconstruction of these elementary aims. Hence, however, "democratic" such schemes might be in theory, they could not be so in practice unless the process of their accomplishment itself were also democratic, unless the suggested revaluation of these elementary motives were generally accepted. Plans made for the extension of democracy are ever on the verge of anti-democracy.

But now be it noted that in this respect at least the democratic outlook presents certain affinities to the neo-psychological, namely to that portion of the findings of psychology which exhibits the foundation of the human will in various elementary instincts. However, the modern psychologist may be inclined, like other "scientists," to disparage Democracy on the score of efficiency, he at least has no standing as a critic of the purposes whose fulfilment it secures. Indeed much might be said in favour of the contention

*As for these latter, while it is obvious that class-dictatorship is the negation of democratic government, while it is clear that the views of those who seize on the conflict of interests in the division of the product of industry and would erect that into the vehicle of complete social regeneration—a view, by the way, not too far removed, in theory or in history, from the equally romantic belief in Free Competition as the all-sufficient source of human welfare—are, in their entire disbelief in the people or community, only capable of a pathological relation to Democracy, yet that there is some relation appears in that direction towards "emancipation" instead of mere distribution, in the light of which all computations of losses in comfort or resources, their own included, arising from the consequent industrial upheavals are apt to be treated by those responsible as the merest irrelevancy.

that contemporary Psychology is historically the product of the modern democratic movement, and that not by mere negation. It certainly seems to reflect this particular one of the aspects of Democracy.

And even in respect of those other branches of psychology in which a "scientific" basis is said to be at last provided for beliefs in inequalities of human capacity, we must remember that these inequalities are now professedly taken on a strictly "natural" basis of biological to the exclusion of legal inheritance. Traditional privilege is eliminated; the primary question is not one of that *to* which, but as to that *of* which, a man is born. The former must now be determined by the latter, which in turn is to be estimated as far as may be on a basis of specific performance.

But surely such a change of emphasis is formally in a democratic direction. Moreover the strict enforcement of the consequences of these findings in the distribution of opportunity or even of the right to exist is something to which a democratic government is just as fully entitled as any other. Where is the triumph of the democratic principle if the sovereignty of the democratic state is less complete than that of those forms of government it has supplanted? Yet experience shows that this claim is the most fertile source of disappointment to those who have been the leaders of democratic movements. They have seemed to expect that they could establish popular sovereignty—without establishing popular sovereignty. The scientist is more likely to be found charging democratic government with lack of inclination than with any reticence in claiming the authority to carry out his programme of social regimentation.

The examination of this paradox is essential to our argument, but meanwhile we must not forget to notice how it leaves those who would maintain the dual position of whole-hearted acceptance of the methods and results of "biological" psychology and eagerness for the prevalance of ethical standards (if not belief in their existing reality). Such thinkers are apt to argue that the basis of Democracy is abstractly ideal; that where we judge everything by the quantity of material products, the doctrine that many people are by nature slaves is true; that autocracy is the most efficient form of government; but that Democracy in alone doing justice to the claims of personality is worth the sacrifice of efficiency which it entails. But from the "scientific" standpoint everything is "material" in the classical and only intelligible sense of the word, namely conducive to an ulterior purpose. Personality, then, is as material as anything else; do not the latest treatises of psychology give us lists of its ingredients with recipes for their "integration?"

The neat and nifty compromise of ethical dualism will not hold water to-day any better than it did at the time and in the hands of Huxley. The ethical defence of Democracy can only be undertaken from an idealist standpoint, namely in the conviction that the world of morals and the world of fact are the same world (a standpoint, be it remarked, which leaves little room for any attitude of blank superiority to common motives and aspirations). Thus for example when *equality* is in question, conclusions rested upon the antithesis of fact and value are apt to be weak. Inequality is the universal fact, you say; equality the ideal, not yet realized, ever to be sought. But such being the situation, the democrat is not nearly so obviously the man to handle it as the advanced eugenist who is in a position to offer, given a free hand, a definite practicable scheme for manufacturing equality by the elimination of the "unfit." The true line of procedure for the democrat is to take both equality and inequality not as the one a pure ideal and the other a mere fact, but both as *hypotheses*. Hypotheses are characteristically as to fact, not as to ideals in contradistinction to fact. The business of the democrat is, then, to show that his hypothesis of equality does not merely explain the appearances which suggest it as does the opposite hypothesis the appearances which render it the plausible one, but is able to explain the appearances favouring its opponent in a way in which its opponent fails to explain the appearances against itself.

Those who are willing to enter upon this general line of defence, then, are committed to two things. They will not relegate to another world those deliverances of "scientific psychology" which run counter to democratic theory, but will take up the burden of refuting them however great their current prestige, at the same time explaining their appearance. And they will undertake to show that the "given" ends of the ordinary man, such as are taken to afford a basis sufficient to justify the authority claimed on behalf of democratic government and legislation, have a potential significance for the maintenance of the rights of personality which is inconceivable when they are explained biologically in terms of primary atomic "instincts."

And first as to the emotional basis of democratic theories. The contrast between the man of feeling and the man of science is, of course, a commonplace, even although the suspicion will out upon occasion that they are both men of straw. In the scientific tradition emotion is the great bugbear; the enemy of that regard for hard facts, cold realities, and the like which is judged so necessary to the pursuit and attainment of the plain unvarnished truth; the deflector and extinguisher of the dry light of reason. Modern

psychologists, moreover, are very ready with a causal account of every sort of theory in terms of types, arising severally from specific emotions or emotional complexes, themselves the energies of primary instincts whose interest is in anything but the truth. Not only so, but they can show that advanced democratic theories in particular are the product of "emotional instability," apparently the permanent predicament of the man who will not or cannot divest himself of every tendency to righteous indignation.

The complete intellectual and moral scepticism of this general position is obvious. It o'erleaps itself. It leaves no room for any theory to be true, or proved. Scientists, as they are called, should be careful how they disparage emotion. The entire process of discovery and verification is steeped in emotion, from the moment when we mark with surprise that A is B and exclaim—It is wonderful! to the instant that confirms our surmise that A becomes B when it is C, and confess—It is beautiful! Of all the emotions that threaten the spirit of truth, there is none more dangerous than the experimental emotion. When the very course of nature is developing according to plan, when the spot of light quivers to rest at the expected notch on the scale; then is the time when men are ready to swear to the proof of much that has not been proved at all, then is at its direst the need which philosophy, and not any *ad hoc* mechanical control of "the emotions," can alone supply. So much must we bear in mind when we hear men talking "scientifically" about "the stark facts of human nature," or of "racial realities," or using expressions still more highly emotional for the current heresy that the potential is somehow more actual than is actuality itself.

The ostensible shift of philosophic interest in matters of science, of which Pragmatism and Instrumentalism generally have been either the cause or the symptom, from questions of the pictorial truth of natural knowledge to questions of the practical value of scientific technique would seem to contain this important element of utility for the discussion of proposed intromissions of natural science with politics; that while it is easy for the theorems of "pure" science to be taken absolutely as if they were contingent on no assumptions (since the ready resentment of their devotees at any suggestion of philosophic criticism, idle and inexpert as they declare it to be, is just as readily seconded by the great majority who would find the critic at least as hard to follow as the criticized), it is never in the least plausible that the deliverances of a form of science which issues straighway in practical plans should be accepted without reference to a wider qualifying context. The query, *cui bono,* springs at once to the lips. Everybody, as Plato observed, has an interest in the good, and therein everybody can become expert. Pro-

fessor G. P. Adams warns us against supposing that social problems are to be solved by the precepts of any applied science based upon the generalized findings of a corresponding theoretical (positive) science. But with science become explicitly pragmatic in its whole purport, the view may well be taken that it will no longer be a case of the specialist ascending beyond all following to those heights of hypothetical abstraction necessary to reach the truths of "pure" science and, on the strength of his ability to do so, or of the simplicity (once stated) of the principles he enunciates, claiming the right to impose upon the activities, and even the ultimate purposes of humanity at large, as upon a more or less refractory material, the *formulae* deduced by him from these principles plus his own tacit conception of what is good for people. The more concrete scientific procedure must earn its own approval at every step by those affected in its operations, so that there is no risk of abstract principles being ridden to death or the good of humanity being treated as so much raw material.

Such might readily be supposed to be eminently the procedure of contemporary psychology. It would seem to be not so much an applied science as one that is all application together, to which in fact the distinction of principles and applications of principle does not apply. Since the subject-matter of psychology is precisely human beings, it would seem that there is no call upon the psychologist to abstract from the human good in search of general *formulae* of control and thus to lose sympathy with his subjects. Of if he were to do so, it would be at once made evident in the failure of his plans. That so-called applications of psychology do take place, then, is treated as evidence that they do not conflict with the aspirations of their subjects, but rather tend to satisfy them, and hence that the findings of "scientific" psychology about human nature are true.

Unfortunately there is *prima facie* evidence of dissatisfaction with psychological technique on the part of some at least of those who have been made its subjects. This is notorious in the case of certain forms of "Industrial Psychology." In other cases, such as that of "Intelligence Tests," where the subjects are children, it is probable that, however agreeable these may be reported to have found the experience, they would be less satisfied if they realised the inferences that were being drawn from their own performances under the tests. More generally it falls to be noted that primary satisfaction with such proceedings in their subjects is always to be discounted by the ideality, the inherent though as yet unawakened dialectic of given desires. But without thus anticipating our conclusion, it is at least admitted that conflict is possible, and our

point then is that it has not been made clear that its solution is any more direct, or can be reached through any less arduous investigation, than in the case of techniques derived from the "physical" sciences, which have gone through the formal steps of natural law reached by abstraction, hypothesis and experimental verification *in pari materia,* followed by deliberate application of deduced precept to the more complex world of human relationships.

Indeed such appearances as there may be at the present time to suggest that psychological technique is more closely in touch than are others with the interests of its subjects as approved to themselves are capable of a variety of interpretations. They may mean that the psychological standpoint is such as to include an appreciative concern with the good of and for man. But this is in fact only possible on that "older" view of psychology which adopts the standpoint of self-consciousness and is part of philosophy. This is the standpoint, e.g., of Professor Ward, in whose hands psychology is the corrective of the abstraction from subjective significance made by the sciences of "external" nature. It is true of such a psychology that its practical bearings consist rather in principles to be "borne in mind" than in *formulae* for deliberate and external "application." On the other hand the absence of such *formulae* from the "new" psychology, in so far as it is admitted at all, may rather be taken by the exponents of psycho-technics to mean merely that the science is not yet sufficiently advanced. This would appear to be how the late Dr. Rivers understood the position. He states that "knowledge of the facts of social and political behaviour can make a far greater contribution to our psychology than any psychological knowledge we possess *at present* can contribute to our understanding and treatment of social and political problems"* and gives instance after instance in support of this reading of the present situation. Similarly we often hear it asserted by the promoters of "intelligence" tests that they do not as yet profess to be able to explain on the basis of their tests what it is that is being measured, or what is the nature of intelligence. This purely "theoretical" question, they say, makes no difference to the accuracy or value of the tests in practice.

The latter position is of course absurd. The very fact that use of "intelligence" tests is made or even suggested towards the modification of existing educational, industrial, or genetic habits of procedure shows that those who propose it possess a definite theory of what intelligence is, or alternatively of what it is that the tests are measuring. But this is only a glaring instance of the more general case that a naturalistic psychology cannot be directly prac-

*Psychology and Politics, p. 16. Italics mine.

tical, in the sense of dispensing with a theoretical reference to hypothetical abstractions, so as to avoid the need for an ethical and, as I should contend, genuinely psychological critique of its procedure in inserting the technological derivatives of these abstractions into the guidance of practice. Some sense of this is evident in that ethical dualism concocted by certain contemporary writers in face of the question of "applied psychology" which we noticed before.

I have indicated that there is a psychology which is directly practical, that of the general type of Ward's, and that I hold this to be the only psychology. But even if the question between its genuineness and that of the self-styled scientific sort be held still debateable, it is surely most reprehensible for the partizans of the latter to run with the hare and hunt with the hounds, for them while vaunting the superior efficiency that comes of their "scientific" standpoint and methods, at the same time to take advantage of the moral and intellectual promise which attaches in the eyes of the public to the investigations of Psychology only from its traditional maintenance of the standpoint of self-consciousness, a position by themselves methodically repudiated.

The pragmatic method in science, then, or the advance into practical prominence of sciences which appear more fully to exemplify it, turns out not to afford us the assistance we might have been led to expect in our dealings with the problems raised by proposals for a more scientific mode of living. We are forced back upon the old method of testing the alternative plans by a scrutiny of the picture of the facts of life which they disclose in their methodical assumptions. Of any conception of the good too, of the purpose of life, which we might think of employing in such a scrutiny, we are in the end forced to ask what it means in the way of an actual universe, and compare it with our general knowledge of the facts of life. The problem is one to be settled by insight.

Having now got rid of so much in the statements of recent psychology as is mere advertising clamour, we shall attempt to set forth the picture of the actual life of men in community that is compatible with or is implied by the neo-psychological attitude to the solution of social or political questions. We shall ask whether the facts as we are in a position to realize them are recognizable in that picture, and how the picture compares in this respect with that which inspires democratic political theory. Let us begin by noting the superficial contrast of the two as revealed in "scientific" criticisms of Democracy; let us resume these.

1. It is argued in the first place that civilisation has in any case an inherent tendency to defeat its own objects, through the relaxation of the struggle for existence which it entails, and the im-

pairing of racial purity which it promotes, but that an especially strong *impetus* is given to the operation of these tendencies by the spread of democratic ideas. Thus while the survival of the values of civilisation requires a deliberate provision of conditions analogous to those prevailing antecedently to the rise of civilisation, so as to ensure the survival of the fittest, any measures in this direction must come in conflict with democratic ideas, and can only secure adoption through some diminution in the prevalence of those ideas.

2. Democracy is inefficient. Both in its existing forms and in current projects for its more intensive development, it tends away from the fundamental principle of efficiency, namely specialisation and co-ordination of functions.

3. Further, it is pointed out that democratic institutions belong to that stage in the development of social or political questions where they are still matters of opinion. At their very best, these institutions have the merely negative merit of providing a remedy for ignorance. When that ignorance has disappeared in the light of Science the need for them automatically vanishes, and political direction becomes a wholly positive affair to be carried on by an uncontrolled hierarchy of experts.

On all these counts, it may then be urged, the "scientific" findings of a naturalistic psychology give confirmation and point to the more general scientific criticism. Biological psychology purports to penetrate below the "conventional" existence of "national" communities to the underlying racial realities, to reveal the *mental* qualities, the capacities and dispositions, upon which the persistence and character of races depends, and to show how the operations of natural selection are necessary to their establishment and maintenance. Thus it indicates a eugenic programme.

Further, by its discovery of the manner in which these specific capacities occur in the individual, it purports to provide the only true basis for that specialization of function which is the essential factor in the maintenance of a civilised community. But in this it professes to have removed from the sphere of opinion what has been the only important question on which public opinion is and can be formed and exercised, namely to suit the man to the place. For the others, it also claims to have made the sources of opinion a matter of exact knowledge, so that the important question about opinion comes to be not that of giving effect to it, but of controlling it. With all this done, the machinery of democratic legislation and administration is in a fair way to be superseded.

How far, then, does the conception of man's actual political life which all this implies, even when it is borne in mind that it records primarily a programme rather than a fact, agree with the

facts (or with possibilities they reasonably suggest) as we are familiar with them? This question I intend to discuss in detail in a subsequent paper. Compactly stated, the solution which I shall propose turns on the contrast of the category of Community with that of Substance. Incidentally to the discussion I shall undertake a criticism of the theoretical basis of biological psychology, and shall attempt a deduction of the category of Heredity, as a product of the effort to find an immediate or positive form for the spiritual.

DISCUSSIONS.

I.—ON THE STATUS OF PHYSICAL OBJECTS IN THE THEORY OF KNOWLEDGE.

By E. V. Miller, Auckland, N.Z.

This article is the embodiment of some considerations arising out of Mr. A. R. Knight's criticism of the Hon. Bertrand Russell's theory of objects, contained in the account of "Modern Cambridge Philosophers," published in this Journal (March, 1925).

Mr. Knight first describes in outline Mr. Russell's theory of "things" or physical objects; or rather he takes that theory as far as the emergence, not of a "thing," but only of an instantaneous element of a thing, called by Mr. Russell, a "momentary thing."* This is nothing more than a collection of all the simultaneous actual and possible aspects of what is ordinarily called the thing. "Aspect" here includes tactual, auditory, and other sensa, as well as visual sensa, but in every case corrected for any distorting influence of the medium existing between the thing and the point of view. Mr. Knight's account unavoidably suffers from brevity so that he does not mention this correction, nor does he mention (though it is implied in his last criticism) that a collection of "momentary things" ocucrring as a series in time and selected according to dynamical laws is what Mr. Russell means by a thing or physical object.†

Mr. Knight's first criticism relates to the construction of the momentary thing. He says "In the first place its intelligibility depends on the existence of things *in our sense*. Mr. Russell's collection is not a collection of *all* the appearances which would appear to men, wherever they were, and in whatever direction they were looking. The collection, of which Mr. Russell says the sun consists, does not include the appearances which appear to the man who is looking down his nose, but only all those appearances which appear to those who are looking towards *what we call the sun*. And so, in order to define his collection, Mr. Russell must assume that things in our sense exist."

*"The Analysis of Mind," p. 125.
†Op. cit. p. 125.

The validity of this criticism appears to depend upon the assumption that there is nothing in, or arising out of, any interrelations which the aspects themselves may possess which would serve as a principle of assortment of those aspects, but that on the contrary the apportionment of aspects to their appropriate collections can only be governed by the relations which exist between the aspects and the collection or object. It would follow that before any allocation could take place a knowledge of physical objects must exist, and this would involve a complete overthrow of Mr. Russell's theory. Continuing, Mr. Knight says, "He (Mr. Russell) endeavours to escape this difficulty by saying that A and B will be both members of the collection which is a thing, if A is related to the other sensa of the person who is sensing (or could sense) A in the same way as B is related to the other sensa of the person who is sensing (or could sense) B." I do not call to mind Mr. Russell's use of this statement as an account of the principle of assortment of aspects. In this, of course, I may be at fault, but numerous passages might be quoted in which Mr. Russell describes the principle of assortment in a different way. The last passage quoted from Mr. Knight's article appears to be a definition of similarity as applied to aspects. For it is not at once apparent what is meant by the similarity of aspects which appear to different people. This is defined if we say that two such aspects, A and B, are to be called similar if the relation of A to the rest of its percipient's sensa is the same as that of B to the rest of *its* percipient's sensa. If we accept that definition then the passage in Mr. Knight's article implies that Mr. Russell's principle of assortment is similarity. But this would be an unwarranted simplification of the theory. Indeed, exact similarity of simultaneous aspects is denied by Mr. Russell, who bases his assortment on discoverable laws of variation of aspects with change of position. These he calls the generalised laws of "perspective," which include the ordinary laws of perspective as a special case.* In "The Analysis of Mind" (p. 98) it is pointed out that even if there is a "real" physical object this must necessarily be inferred from its aspects; and, just as in the case under review, these must be collected together before the object is known since the object is inferred from the collection. Thus even if objects were entities and not constructions† our knowledge of them presupposes that aspects have interrelations which alone disclose this knowledge to us.

If the foregoing reasoning is valid it appears fairly to answer Mr. Knight's first criticism and to disclose the reason why the aspect of my boot which appears when I look down my nose is not to be classed with the simultaneous aspect which appears to my friend who is looking—as we say—at the sun. Apart from the dissimilarity of the two aspects, which, alone, would merely cause us to *suspect* that they should be allocated to different objects, we do not find them to be in any way connected by the generalised laws of perspective. If we put both aspects into the same collection the system of these laws would receive a disintegrating shock; and

*Op. cit. p. 125. "Mysticism and Logic," p. 137.
†For the importance Mr. Russell attaches to this distinction, see "Mysticism and Logic," p. 155.

with a few more such incongruous allocations it would crumble, and leave aspects to be assorted in any arbitrary and insane manner. The resulting objects, too, would defy the laws of physics and, unless some other system of law were discovered appropriate to such bizarre objects, all relational knowledge would disappear.

Mr. Knight's second criticism relates to "the difficulties connected with the fact that Mr. Russell has never dealt with the observer's body in terms of his theory." In various passages Mr. Russell refers to the status of the observer's body in his theory. It is part of the physical world; and, more definitely, it is part of the physical medium intervening between the object claiming attention and the point of view.* But if Mr. Knight means that there is a serious difficulty in this exposition which has not been dealt with by Mr. Russell I agree with him.

First of all a difficulty more apparent than real shows itself owing to the reversal of the usual order of thought, connecting the object with its perception, which is a distinctive feature of Mr. Russell's theory.† We note that while it is the ordinary and the scientific usage to take things in the order (i) object, or cause; (ii) transmission through medium; (iii) sensation; Mr. Russell starts with the sensation or aspect, which he regards as a complex consisting of (i) the aspect of the object; (ii) the distortion due to the medium; he then eliminates the effect of the medium,‡ arriving thus at the aspect which is a member of the collection called the object. Thus the object comes last in the series. In the course of his exposition, Mr. Russell's language is sometimes appropriate to the first order, and sometimes to the second, but it is not really difficult to gather his meaning.

In the case of a medium which does not distort, approach to an object has the effect of changing its aspects according to the generalised laws of "perspective." With a distorting medium the change of aspects is different, and the departure from "regular" appearance is less when less medium intervenes between the object and the point of view. Mr. Russell makes use of this diminution of divergence of aspect from the "regular" appearance, as the object is approached, to eliminate the effect of the medium and to define what he means by the aspects or appearances which constitute objects. It is in this process of elimination that the real difficulty arises. Mr. Russell's scheme really requires that we approach the object until there is contact between it and the external termini of the neural mechanism, for otherwise the effects of such media as gloves or blue spectacles would escape elimination and would be included in the object. But if the neural mechanism itself is to be regarded as part of the medium we should, in order to eliminate its effects, need to get the object into touch with its internal termini, where the miracle of sensation occurs. No way seems to present itself of ascertaining the distorting effect of this portion of the medium. It is true that if the neural mechanism in any individual is abnormal, as evidenced by comparison with other people, this abnormality

*Myst. and Log., pp. 134, 149, 165. The Anal. of Mind, pp. 104, 106.
†Myst. and Log., p. 135.
‡The Anal. of Mind, p. 106, 134-5.

can be allowed for; but we have no means of knowing, or even guessing, what the distorting effect of the normal mechanism may be. If it *does* distort then we can never feel, know, or even imagine, the entities which constitute objects. Thus if we accept Mr. Russell's theory we must either make the stark assumption that the neural mechanism does not distort or else sacrifice one of the chief advantages of the theory, namely, the belief that we are acquainted with some, at least, of the entities which constitute objects.

Mr. Knight's last criticism is that if all actual and possible aspects ob the object, past, present, and future, are what constitute it, then we must deny the possibility of change. "For then the wood is not really changed into ashes when I put it on the fire; both wood and the ashes have always existed, but first the one "appears," and then the other.

Mr. Knight's reasoning is, I think, justified, for if *all* aspects of an object are required to constitute it then it is obvious that no new aspect can appear nor any existing one disappear; thus the object is immutable. But Mr. Knight's conclusion is by no means a reductio ad absurdum, though the interpretation which renders it reasonable leads Mr. Russell into strange company.

Various philosophic systems value the ideal of immutability. But you cannot have immutability and change too, unless on the condition that one is regarded as real and the other illusive or imaginary. The trend towards immutability is in evidence in common sense thought, and even more so in science. No doubt, in the common sense view, the object wood changes to the object ashes, but, still in that view, both these are classed as examples of a more inclusive object, solid matter, which does not change to something else in the burning. That is as far as common sense goes; but chemists aver that one of the results of the burning is the change of solid into gas, nevertheless they say that the object "matter" has not changed to something else; and if a modern physicist objects that some of it *has* changed into radiant energy during the burning the retort is sure to be made, by some philosopher to whom immutability is a necessity of thought, that some more fundamental substance embracing both matter and energy has remained unchanged during the burning, and is immutable in all circumstances. By similar reasoning all finite objects lead to this same substance.

Now it would appear that no object but this will finally satisfy Russell's definition of an object. Finite objects such as my walking stick are got by arbitrarily limiting the collection of aspects which constitute them, *e.g.*, discarding all those of my walking stick when it was the branch of a tree and previous to that date, as well as all those when it was ashes, and subsequent to that date. This restricted choice of objects means that finite objects are made by the mind for the mind's use But the unrestricted construction of objects out of aspects leads to denial of the existence of finite objects and the assertion of the existence of one object only—the Whole. This object must be independent of mind, for in Mr. Russell's theory it makes no difference to the object-forming function of an aspect whether the latter is sensed or not; and although mind is necessary to select

aspects appropriate to a finite object, there is no selection involved in the one object finally arrived at, since it is constituted of all aspects. We must conclude then, with Hegel, that finite objects belong to the category of knowledge, and of mind and not to that of non-mental existence.

In Mysticism and Logic, Chap. VIII Mr. Russell starts the development of his theory from the most indubitable elements he can find. Naturally these are the sense data of one individual as received by himself—himself consisting of a certain system of sense data with their images. He regrets that he cannot carry this solipsistic treatment of the problem very far before he is forced to leave the realm of indubitable things and to have recourse to assumptions, the first two of which are (i) that other minds with their sense data exist, and (ii) that sense data, or aspects, exist even where there are no minds to perceive them. But the question may be asked whether the abandonment of the solipsistic treatment is really necessary. If the conclusion reached in the previous paragraph about the nature of finite objects is warranted, it appears to me that Mr. Russell's endeavour to construct finite objects which shall exist in the same sense when an aspect of them is *not* being sensed as when it is, has miscarried, and has given us purely mental entities after all. But it ought to be feasible to construct a mental entity from other mental entities, whether ultra-mental entities exist or not, and without leaving the domain of one person's mind. In the remainder of this article I propose to offer some suggestions as to how this might be done, adhering to Mr. Russell's method as closely as the change in conscious aim will permit.

We start with sensations and images; indubitable elements of the concrete percept. To succeed I shall have to show, among other things, that "knowledge about" is about these entities and no others. And first I would define a certain class of images which, owing to vagueness of language, Mr. Russell often fails to distinguish from sensations. I refer to a sub-class of memory images consisting of all those memory images which relate to particular vanished sensations, such as the aspect of the Auckland Harbour which presented itself in my history at 10.30 a.m. on the 29th of January last. I will call such images "aspect images." Each one relates to a position in the time order, though not always so precisely as in the case just mentioned. I suggest that it is the aspect-image which is ingredient in the thought, and not the aspect itself, when we—so to say—think of a vanished aspect.

I follow Mr. Russell in regarding an object as a collection of entities, but the entities collected are not sensations but aspect images.

It is possible, simultaneously, to have a sensation and to think about it, as when we say, "Now I must remember this." That remark, I believe, indicates that we are performing the first act of memory, and that the aspect image is ingredient in the thought even although the aspect or sensation is also present to feeling. Thus I suggest that whenever a present sensation is at the same time thought of, be it to compare it with, or associate it with, the aspect image of a past sensation, or for any other pur-

pose, there is present also an aspect image of the *present* sensation which—and not the actual sensation—is ingredient in the thought. I hold this view for three reasons:—(i) the process of thought takes time but sensations are evanescent; (ii) the possibility of comparison of two aspect images seems more reasonable than that of the comparison of an aspect image with a sensation, because the character of the latter differs in some respects markedly from that of the former; (iii) except for the fact that, owing to the fading of memory, an aspect image is more full of detail the nearer in point of time it is to the date to which it relates, so that the aspect image of a present sensation is the fullest that can be got, thought appears to go on just as well when the sensation thought about is absent as when it is present.

If this account of the ultimate elements of thought be true, objects consist of collections of aspect images and not of sensations. An object, then, is not only constructed by the mind but, and here I depart from Russell's view, it is constructed from entities for which it is not necessary, so far at any rate, to claim any ultra-mental existence. However, I follow Mr. Russell's method of eliminating what, on the presupposition of an external world, is called the medium. As pointed out above, this elimination cannot be complete, but it will be found by what follows that this defect is of little consequence.

The collections which constitute objects are limited collections, the principle on which the limitation is made being the same as that which controls the assortment of aspect images—the exigencies of life, which can best be met by that prediction of aspects which is rendered possible when aspect images are reduced to law. There are laws of limited application and laws of wider application, and for this reason objects are far from stable. My walking stick is an object for some purposes, but for others for which more limited laws suffice, its knob is an object, and in this connection my walking stick must be two objects. For purposes involving more inclusive laws wood is the appropriate object—and so on. Further, objects are limited in time, e.g., a flash of lightning; my walking stick; the solar system.

How can an object be thought of? Very often it suffices to think of its name, which thus acts as a symbol of the collection. But with intensive thought something more is required. In such a case it seems to me that one or other aspect image of the collection appears, accompanied by the feeling that it stands for that collection. Thus the object is something more than a bare aspect image, but it *is* an image, and I will call it an "object image."

The assortment of aspect images into object images is the first step in reducing, to an order that shall be efficient for well being, the welter of aspect images. The initiation of this process is rendered possible by the fact that aspect images possess intrinsic relational characteristics such as similarity—or, more strictly, graduated difference—"under," "beside," "beyond," "between," "earlier," "later," "simultaneous" and so on. But such relations alone, as Mr. Russell regrets to find, will not take us very far.

It is of very great use in the elaboration of knowledge to suppose that there are ultra-mental existencies corresponding to object images. It is further of great use to suppose that certain of these ultra-mental objects have minds, with aspects and images similar to one's own. These are the two assumptions which Mr. Russell makes with regret.* But I will suggest that these ideas may be advanced by the solipsist, not as serious assumptions calling for belief, but as fictions to be used in the simplification of his thought processes, and then to be discarded.

As a result of this process something which may be called a system of knowledge emerges. It may be full of puzzles and miracles and unattached aspect images, but it serves as a guide in purposeful action and gradually merges into science with its strange objects and inclusive laws. In their first inception primitive laws have reference to naive objects (such as birds, trees, rocks), their motions and reactions. Homely proverbs such as "The early bird gets the worm," embody such laws. Science carries on this tradition, but the more inclusive laws which are always being sought involve —in order to provide suitable object images—assortments of aspect images which would have been incomprehensible and useless in the earlier stage. Speaking from the non-solipsist standpoint, the primitive needs of life are served by the primitive laws and the primitive objects, and this is why the latter remain the same from generation to generation. A tree now is probably the same collection of aspect images that it was to the cave dweller. For all ordinary purposes of life the sun, moon and stars yet move across the sky and rise and set just as if Copernicus had never advanced the heliocentric laws of their motion. But as scientific knowledge advances object images change. Atoms are not what they were; light corpuscles have changed into ether waves; phlogiston into energy; matter and energy into a substance which is awaiting a name. Changes such as these are of such common and continuous occurrence, and are seen to be so inevitable, that for long past the acuter scientific minds have recognised that it is not the existence or non-existence of such objects which is of importance to knowledge. The preoccupation of science is really with relations such as are expressed in its equations, and any old object which helps in the discovery of these is welcome. Such objects are pictures—there is a large gallery of them, new and old—which serve somewhat the same function as letters in algebra, and the visible tendency is that as the relations discovered by science become more nearly all-inclusive the pictures may be dispensed with. This points to a limit, doubtless very remote from our present state of knowledge, when, without any injury to knowledge the whole collection of scientific pictures may be burned, or kept in a museum of curiosities.

But would not this be to etherialise relations out of existence by removing their terms? If the equations of science do not relate to objects, to what do they relate? We are guided to the answer to this question by the fact that all these equations owe their meaning *primarily* to thought about observations; that is, they owe it to aspect images; and they lead to, and

*Myst. and Log., p. 158.

the validity of their meaning is verified by, other observations. A profound saying of Poynting's quoted with approval by Sir J. J. Thomson, and taken by Whitehead as the keynote of his book, "The Principle of Relativity"* is, "I have no doubt whatever that our ultimate aim must be to describe the sensible in terms of the sensible." Put into the language of this article this means that the problem of science is to find those interrelations of aspect images which are not disclosed except to thought. Knowing the law of lunar eclipses, and observing one eclipse, an astronomer predicts the time of the next one. The notion of ultra-mental continuous existents called sun, moon and earth has been most useful in enabling the law to be discovered, but the law having been found it is no longer necessary to imagine any such existents either at the times of the observations or in between them.† The law thus reveals itself as an element of knowledge connecting realities, pure and complete in itself, in the sense that it is not strengthened in any way, but rather contaminated, by imaginings that have become superfluous. When the edifice of knowledge is completed the scaffolding may be removed.

On this view it would appear that the posited external world and other minds are to be classed with the posited light corpuscles, ether waves, electrons, of science. They are merely the earliest exhibits in what I have called the picture collection. Knowledge, as it becomes sufficiently robust to be freed from its adventitious aids, is seen to be knowdelge about aspects —or rather about aspect images, since the former are too evanescent for thought—and not about objects, nor even about object images.

The above exposition is solipsistic throughout, for although imagination of an external world of objects is required as a temporary aid, *belief* in that world is nowhere necessary. This is just the sting of the solipsist attack. The solipsist can be defeated if he ventures to *deny* other existences than his own mental states. And if he claims that the external world and other people's minds are not "given" to him in the way that sense data are given, I imagine that most philosophers would agree with him. But when he claims that all his experience and knowledge can be fully accounted for on the hypothesis that nothing exists but his own mind, *and* that the principle of "Occam's razor" requires him to be content with that hypothesis, then he becomes unassailable,—and obnoxious. For seemingly, all philosophers would deprecate multiplying entities and hypotheses which are not neecssary for knowledge, but only for sentiment.

In a recent publication of the Aristotelian Society‡ Mr. C. A. Richardson has an article in which he criticises various types of philosophic theory, and concludes—with good reason I think—that the only way in which any of them escape the shadow of solipsism is by the expedient of *assuming* the external world and other minds, the assumption being sometimes more or less veiled. There is nothing veiled about Mr. Russell's escape how-

*See p. 5 of that work.

†For the view that the crucial test of knowledge is correct prediction. I may claim Mr. Russell's support. See Anal. of Mind, p. 270-1, notwithstanding verbally contradictory passages, p. 165 and p. 232.

‡Relativity, Logic, and Mysticism.

ever. He lets us know when these assumptions are made. It is almost at the very ouset of his investigation, so that whatever weakness is involved in making arbitary assumptions communicates itself to the whole structure of his theory. In the method I have outlined, this weakness does not exist; but if at the end of the process we choose—as, in defiance of Occam, everyone will choose—to regard certain of the "aids" as real existents, the weakness will enter at that point of the superstructure instead of at the foundations.

Mr. Richardson, in the article just mentioned, does not despair of the final reduction of the solipsist's strong position. He says, "Yet I think, though I am by no means sure, that there must be a way out if we can find the real ground for our instinctive belief in the existence of others."

I would suggest that in the later stages of the evolution of knowledge, especially during the rapid advance of science, there has been a marked tendency to take as the basis of relational knowledge only a portion of what is "given" in awareness. Many philosophers, in the search for what is really "given," rightly discard from the concrete percept everything of the nature of judgment or assumption, conscious or unconscious. The remainder is referred to by Mr. Russell as a "core" which, he says, consists of sensation, or as others would say, of sense data, or sensa. But it must be obvious that things like colours, sounds, tactual feelings, etc., even with their images, do not by any means constitute the whole non-judgmental "core." Viewing a sunset, our sensations are colours and shapes; it is to these and such as these, as a foundation, that knowledge is usually traced by philosophers who have a keen appreciation of the efficiency of the scientific method. But besides these feelings we may have others, intense; ineffable; to be classed with those aroused by music, art, and poetry; and inadequately described by such adjectives as "gorgeous," "ethereal," "serene," "ominous," and so on. These affective values, like the blues and greens and cloud shapes, come to us not as truths or propositions, but as aspects; they appear and are *there*, and there is no more to be said. Moreover, the whole experience comes as a unity; reflection breaks it up into sensations and values. This procedure may be an initial error, but even if it is justified by convenience why should knowledge be based solely on the sensations? As a matter of fact it has not been so in the past. The wonder, the gratitude, the resentment, the fear, the adoration, which, together with sights and sounds, are factors of the "core" of percepts, have been responsible for the theologies of the world, including magic and the mythologies. In early stages of culture theology was perhaps the greater part of the knowledge of the time. And it may be because exclusive attention to sense data was gradually found to immensely simplify the problem of rationalising a part of experience, and that part the part which is most useful for the primitive wants of life, on which material comfort depends, that these data have tended to usurp a place at the foundation of knowledge which rightly belongs to a whole of which they are only a part The rapid building up of scientific knowledge in the 18th and 19th centuries necessarily involved the gradual ejectment of every trace of theology, and of any system based even in part on values, from what was

called, by its advocates, knowledge as distinguished from superstition. It may be that the adoption by science of this narrow basis leads necessarily to solipsism, whereas the universal instinctive belief in external existents may require for its justification the recognition, dimly present to primitive and unsophisticated people that the "given" includes much besides sensations and images. I do not mean that emotions are to be allowed to interfere in the slightest degree with the processes of reason, but that they are to be recognised as ultimate facts requiring the same detached treatment that sense data receive. The difficulty of attaining knowledge, when the unity of this wider basis is recognised, is no doubt greatly increased, but it may well be that along that road only lie the solutions of various problems which at present appear hopelessly insoluble.

DISCUSSION II.—EXAMINATION OF IMMIGRANTS.

By A. H. Martin, M.A., Ph.D., Lecturer in Psychology,
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The original article entitled "Psychological Examination of Immigrants," which appeared in the issue of this Journal, September, 1924, was an attempt to set forth coldly, scientifically, and without prejudice, the need for discrimination in the choice of immigrants. To this point the article was carefully confined. Miss Campbell's criticism in the December issue (a) alleges discrimination against certain foreign immigrant groups, viz., those from the south and east of Europe; (b) implies an advocacy of what she describes as "panic legislation," and (c) makes an obscure and pointless reference to "the Irish, especially the Irish!" Either Miss Campbell's sympathy for the under-dog has clouded her mental vision, or such unjustified misinterpretation of the original text is the result of undue haste on her part. A careful perusal of it should make clear to an unprejudiced reader that what was advocated was the admission of all comers upon their mental and physical merits, with the sole reservation that "swamping" should not be permitted. The only direct references made to individual nationalities were in the tables scheduling numbers of immigrants and test averages; the figures therein were used to illustrate the thesis that the recent immigrant types that were offering were apparently inferior in intelligence to those of earlier decades, owing to the elimination of the factor of "social stress." Exception was expressly taken to the assumption that the immigrants received into the U.S.A. were a fair representative sampling of their various nationalities. (Vol. III., p. 198.)

As to the possibility of the tide of immigration turning this way, Miss Campbell is convinced that there is no such menace, since recent U.S.A. quotas from Italy have not been completed. A more correct gauge is the expansion of population in the latter country. Concerning this a recent issue of the American "Nation," a recognised liberal organ, sums up the situation as follows: "Italy is vastly overcrowded; her soil cannot support her population. If she exported half a million people a year the relief

could only be momentary; the hole would promptly be filled by an increased birthrate." Such a condition of population is not restricted to Italy alone. In the case of such internal increases resulting pressures must find outlet; the problem is—where?

Miss Campbell's correction of the statement "that the foreign-born are in excess of the native population" is gratefully acknowledged. Obviously the statement should have read "foreign-born and descended." As to her criticism that "it is misleading to assert that over six millions were returned as inferior or worse" when only one and three quarter millions were actually examined, it may be confidently asserted that such an inference is fully justified on the "sampling theory" which has been obviously overlooked by her. This sampling method is so generally applied to assays, produce or manufactures, and mental traits, that any attempt at vindication should be superfluous.

The general validity of the U.S.A. army mental tests and their results are impugned by her. Nearly all the objections so far brought forward have proceeded from laymen or arm-chair critics; the comparative results have been accepted by leading American Psychologists as significant. That cases of haste and lack of care have occurred in the administration of the army tests would never be gainsaid; but such discrepancies as might occur would affect all national groups equally and would constitute no serious objection to the general results, for the comparative gradings would still hold good. The defects of administration in these army tests were not nearly so great as alleged by their critics; the majority of the failures in the tests were due, not to inability to see or hear the examiner, but to sheer lack of intelligence on the part of the subject. This was demonstrated by the inferior grades obtained by these people in the individual tests which were administered in all cases of failure or very low scores in the group tests. As a matter of fact all the objections to such tests that might have been raised by laymen as well as all that the scientific psychologist might bring forward were foreseen and obviated, and if mental tests mean anything at all, the army tests results must be regarded as highly significant. A final argument in their favour is the results obtained in the application of Binet and Alpha tests to groups of school children in New York and elsewhere, with the arrangement of their scores according to nationality.* Reference to these should force the conviction that army test results were thoroughly justified from a comparative aspect.

In particular one of the most interesting of these findings was that referring to the "coloured" community in New York, whose offspring actually showed a sightly higher degree of intelligence than the children of one particular European national group. The environmental factor may not be pleaded here, since the language difficulty was eliminated and the same school training afforded to the subjects of both groups. The coloured children were handicapped by a proportion of negro inheritance which was clearly offset by two other factors, (a) that of "social stress" whereby better types were induced to travel beyond the original confines of the Southern States, and (b) the inheritance of a large number of traits from

*cf. Garth, Thos. R. "A Review of Racial Psychology." Psychol. Bull. Vol. XXVI. No. 6.

white ancestry evidently in the possession of the earlier and better types of immigrants.

With reference to assimilation of immigrants, Miss Campbell is of opinion that "the cultural organisation of the foreign-born does not retain a hold over the children." A parallel instance is the arraignment of teachers in our own public schools for the lack of instruction in correct speech. Such a hasty imputation of blame takes little note of the influence of the home, which is more constant and protracted in its effects, as well as affording the primary training in language, primacy being a factor of no little moment in its influence. Thus the child carefully trained to a fair standard of diction in the school, lapses into the slang or argot of his non-academic environment, unless he is exceptionally intelligent and possesses sufficient moral fibre to be able to slough off these influences. What is true of speech is quite as true of culture and moral sanctions. The allotment of responsibility of "weakened authority" to the narrow outlook of American public school teachers is hardly just to that long-suffering body. It may be stated in reply that Miss Campbell's experiences of American teaching personnel must have been considerably less fortunate than my own.

In order to prevent the formation of foreign immigrant groups, Miss Campbell suggests that only a certain percentage of closer settlement blocks should be open to foreign applicants. Such a measure, really a specific application of the quota principle to which she objects, would affect but a small section of immigrants in the first place, and moreover could never be permanently effective, for "freezing out" methods in a given locality have been successfully carried out before to-day. One may instance cases of Japanese colonies in California, and Italian settlers in at least one sugar-farming locality in Queensland. Such restrictions would in no wise affect "foreign colonies" in manufacturing centres, nor could they prevent a gradual monopolisation of certain industries such as, for instance, coastal fishing in N.S.W. by Italians. On the other hand, a proportional quota system of entrance would prevent "swamping," either singly by any particular national group or generally by an overwhelming unassimilable foreign element.

As to the greater incidence of cases of insanity or mental deficiency among immigrants, figures must be faced, and we are not here concerned with causes which cannot in any appreciable measure be remedied. For the private happiness of such unfortunates it were far better that they should be excluded in the first place or, having recently been admitted, that they should be returned to live in their former environment rather than pine in lifelong custody in a foreign land. Again, from an Australian point of view, it may well be asked, what boots it to set our own house in order in this respect, if it may be constantly disturbed by the accession of fresh types of inferior or unstable mentality.

Miss Campbell makes the final suggestion that the League of Nations should assume the regulation of migration. No Commonwealth adminis-

tration is likely to hand over its domestic rights to such a body, no matter how worthy. Admission to this country with the implication of future citizenship, is a privilege not to be lightly bestowed. The best safeguard is the appointment of Australian officials who would be responsible to this country for their authority and methods. So long as our methods of selecting immigrants are impartial, just, and without imputation of inferiority to any nationality, so long must they pass unchallenged by other nations. So long as the standards of admission are fixed according to the internal standards of the community and without menace to its stability, so long must they be recognised as necessary by other peoples. These principles were what the original paper attempted to set forth, and it is the firm conviction of the writer that they may best be achieved by the careful administration of mental tests to incoming immigrants.

REVIEWS AND NOTICES OF BOOKS.

A HISTORY OF GREEK RELIGION. By Martin P. Nilsson. Preface by Sir James G. Frazer. Clarendon Press, Oxford, 1925, pp. 310. 12/6 net.

For twenty years the work of the Swedish scholar, Prof. Nilsson, has been familiar to students of Greek religion. No brief review can do justice to his last volume, which, though more popular than his previous contributions, is based on careful investigation and is certain to take a permanent place in its department. The comparative study of religions, the investigations in the Homeric question, and especially the increasing knowledge of the Minoan-Mycenaean culture, have radically changed previous theories about Greek religion. The Greeks cannot now be regarded as either a pure, or, on the whole, an Aryan race. About the middle of the second millennium B.C., the Aryan Hellenes descended from the North upon a land which was enjoying a mature and advanced culture and religion. This pre-Greek Mediterranean population was of non-Aryan extraction: its centre was Crete, from which colonies had been established on the Greek mainland. Its racial connections were with Western Asia Minor, and there was a close affinity with Egyptian civilisation. The Greeks were thus a fusion of nomadic invaders and Mediterranean civilised aborigines. And the Greek pantheon was a fusion of the gods of the same two races.

As Shelley's words, "We are all Greeks: our laws, our religion, our art, have their roots in Greece" need considerable modifications, so now we are compelled to view Greek religion partly as the continuity of the Minoan-Mycenaean religion: through the coalescence of the two alien races; partly as the modification forced upon it by new experiences and social upheavals; and partly as the reaction of the Hellenic mind to what it found, together with what it brought from the North. This Greek contribution was as characteristic as far-reaching. Greek sanity and love of

plastic beauty successfully protested against the extravagant and the grotesque. The Greeks insisted in bringing science to bear on religion, refusing religion any exemption from the scope of enquiry and criticism. By their anthropomorphism they gave definiteness and personality to their deities, and humanised their mythology. They could as little rest in "powers as in theriomorphism." Their rationalism delivered them from the sphinx-like immobility of the Orient: it rejected the rule of sacerdotalism, and held in restraint until Graeco-Roman days the primitive traffic with magic. They developed the spirit of community fellowship and manifested a tendency toward universal deities with the promise of monotheism. Beyond all ancient peoples the Greeks refused to be terrified by their religion: "there is no dread in their hearts," says Ruskin. And this deliverance from *deisidaemonia,* to which the Romans fell victims, promoted a philosophic outlook and qualified Hellas to become "the nurse of man complete as man."

At the present time the centres of interest in Greek religion are its continuity with antecedent Minoan-Mycenaean culture and its latest syncretistic development in the mystery-cults. The former of these is the main theme of Nilsson's book. Not only do we find mythological figures of Crete in such non-Greek names as Hyakinthos and Rhadamanthys, but pre-Grecian ideas of the other world associated with them. Further, as ancient Hebrew religion, Judaism, Christianity and Islam have in several instances maintained the hallowed character of the same holy places, so we find a continuity of cult centres in Greece, e.g., on the Minoan Palaikastro was built the temple of Zeus Diktaios, which from its ruins, has restored to us the Hymn to Zeus; and in proximity to the H. Triada the beardless Cretan Zeus Velchanos had a temple. Even famous Greek shrines such as Eleusis, Delphi, Delos, Kalaureia, have yielded indisputable evidence of origin under Mycenaean influence. The Greeks showed marked hospitality toward the deities of the conquered race. The familiar Athene traces her origin to the protecting Minoan snake-goddess. The "Mistress of animals" type of Artemis derives at least in part from the bird epiphany of a Minoan nature divinity celebrated in tree-cult and in orgiastic dances. The same ancient culture bequeathed other ideas to Greek religion—the tree-cult, the horns of consecration, the double-headed axe of sacrifice. Three such survivals deserve mention because of their emergence in later mysticism and their influence in Christian thought. The divine child, unnurtured by mother, annually dying and as annually re-born, is the Minoan Vegetation deity, out of which type were evolved the later chthonic deities and deities of immortality of the Mysteries, and the child-gods in Greece, e.g., the Dioskouri. Another form of myth of vegetation deity, also of Minoan derivation, is the "Holy Marriage" represented in the wedding of Zeus and Hera. This took on in the cult brotherhoods of the Mysteries the mystic significance of identification with deity and meets us in amazing forms of Christian mysticism, as e.g., in the epistles of Jerome and in the sermons of Bernard of Clairvaux. A similar long career awaited the Minoan-Mycenaean cult of the dead, out of which arose the cult of "heroes," and out of which again the Christian All Souls. The cult of the dead was a family

affair: that of the "heroes" a parochial affair, the hero's powers being operative, as those of Celtic saints, from the centre where his bones reposed. This cult formed a lasting bond between the worlds of the dead and of the living.

One of the special merits of Nilsson's book lies in his careful tracing of the origin of the great cycles of Greek myth and legend, which used to pass as a peculiar glory of the Greek imagination. Inasmuch as these cycles are indissolubly associated with Minoan or Mycenaean centres in Crete or on the mainland, the Greeks may no longer be credited with their creation; their contribution lies in having humanised and modernised this antique mythology.

The origin of the "enthusiastic" strain in Greek religion presents many problems. Miss Davis in her *Asiatic Dionysos* looks farther east—to India —than all the data will permit. According to Nilsson "the strength of this movement may be better understood if it is regarded as involving not the importation of an entirely foreign deity, but only the revival of ancient Minoan religious ideas which had for a time fallen into the background." This is true in so far as this first tide of "enthusiasm," which swept over the Greek world, brought to the surface elements which had eluded or offended the invading Hellenes. But the North still presents incontestible claims for the chief credit of this great disturber of Hellenic serenity, whose epidemic frenzy Apolline institutionalism regulated and retained.

—S. Angus.

PROBLEMS OF PHILOSOPHY: An Introductory Survey. By G. Watts Cunningham, with a foreword by Viscount Haldane. London, Modern Thinkers' Library. Harrap & Co., London. 1925. Pp. XV, 453. 8/6 net.

If one may judge from the many introductions to philosophy that recently have been published, as well as from other signs, there must be at present a fairly general interest in its subject matter, and a desire for its guidance to a clear outlook on life. This is not altogether matter for surprise. In all English-speaking countries, for example, higher education has been developing apace, and there has been a remarkable increase in the number of persons who at Universities have been taught (presumably) to think for themselves. Disciplined and informed thinking leads to wondering, and wondering to philophising. Again, it is difficult to avoid the conclusion that the prestige of religion nowadays is low; philosophy, therefore, must present itself to many as the only other source whence may be obtained a justification for living. To such persons the present book should commend itself. It is to be recommended to them in that it will not discourage them in thinking for themselves, nor will it encourage them to make a false disjunction between religion and philosophy. As to the former point: the author's usual method is to set forth the diverse solutions of the various problems, to indicate the strong and weak points in each, and (in some cases) to suggest on which side the decision should lie. The range of problems covered is satisfactorily wide, and the book may fairly be said to lead into the whole field of philosophy, to show also that no more

than an entrance has been made, and to give wise directions for the gradual traversing of the field. From the point of view of the teacher of the subject, it would be useful for introductory reading before commencing a philosophy course, or perhaps as a text-book forming a basis for discussion classes at the "pass" standard. In this latter connexion the general bibliography and the questions and exercises accompanying each chapter would be serviceable.

—A. C. Fox.

AN INTRODUCTION TO PSYCHOLOGY. By H. A. Reyburn. London. Harrap & Co. 1925. pp. 324. 7/6 net.

The rapid advance in Psychology and its extension into many special fields of inquiry have resulted in the rather chaotic condition the science now presents. The need of the day is the master mind that will weld the many and diverse doctrines into a homogeneous body of scientific truth. So far, however, the master has not appeared and in his place we have a plethora of text-books that, by their different points of view, their varying emphasis and varied terminology end by confusing rather than enlightening the student, when he begins his study of the science of mind.

If we are to have more text-books then we agree with the general ideas expressed by Professor Reyburn: that the subject should be treated as a positive natural science, that emphasis should be placed on general principles rather than on details, and that the student should be encouraged to gather his material to illustrate the principles, from his own experience and from the works of the master psychologists of the past. Prof. Reyburn therefore stresses the standpoint of psychology and the nature of the body-mind system. In his preface he writes:—"Instead of considering the psychological stand point critically I have endeavoured to adopt it, and to show in general what we see when we look at mind from it. Such a treatment appears to be one of the needs to-day. Even in highly respectable quarters and in the midst of experimental work, curious lapses may be observed and a failure to maintain the positive naturalistic mode of treatment to which a lip homage is paid." The author does not fall into this error but successfully maintains his point of view.

The chapters of the text-book cover the usual topics, including the measurement of intelligence, dreams and mental conflict. In a few places the form of presentation seems liable to confuse the beginner. For example, on p. 16 we find: "Generally speaking then, the neurone may be divided into three parts: a cell-body, an afferent part consisting of branching fibres called dendrites, and an efferent part consisting usually of a single fibre called the axon . . . " Further down on the same page we read: "The simplest possible functional unit would consist of at least two neurones, an afferent one from a sense organ and an efferent one to an effector organ." What would the beginner make of the different meanings of the terms afferent and efferent? Again the use of the term "central sensation" to cover what is usually called an "image" does not seem desirable, especially when the author admits proprioceptive and interoceptive senses from which the individual obtains experiences of either peripheral or "central" sen-

sations. The expert may be able to follow the author here but will not the terminology rather confuse the beginner?

On the whole the book will provide a useful introduction to the study of psychology for the student who has access to the necessary supplementary reading.

—T. A. Hunter.

BRITISH DRAMA: An historical survey from the beginnings to the present time. By Allardyce Nicoll. Harrap & Co., London. 1925. 12/6 net.

A useful manual for those who care to study the development of our drama from the miracles of the middle ages to the psychological allegories of 1925. The author's aim is to show how, amid the many changes of outlook and method, the essential elements of comedy and tragedy remain unchanged. He is therefore of those scientific critics who are "careful of the type," if not entirely "careless of the single life." In general he avoids controversial irrelevancies (the disputed authorship of *Gammer Gurton's Needle*, for example), though he is not afraid of giving his own judgment where he differs from the chorus of periodical criticism, as in asserting his adverse opinion of *Hassan*. The field he reviews is extensive and crowded, and, in a book of less than five hundred pages, his chapters are necessarily concentrated.

There are flaws in the book, but such as revision may correct, for they are mostly matters of detail. Some eccentricity and carelessness of expression are to blame for a little obscurity and ambiguity. If the words be taken literally, it is not true that in the Elizabethan playhouse there was "a stage set in the middle of a benchless open yard and tiers of galleries running round the entirety of the house," so that the groundlings could "surround this platform"; but Professor Nicoll does not mean what he says. Nor does he, when he tells us that Maeterlinck informs his works "with an atmosphere entirely unreal (using that word in the sense of that which deals with the outward phenomena of life)." But why should he call Moll Cutpurse a "bluestocking"? What is "a well-formed chill"—which he says characterized the neo-classic drama of the sixteenth century? Why should Lamb's tragedy be called *John Woodwill?* Inaccuracy in matters of fact is less common than strangeness of expression in this book, though there seem to be a few not very important examples, such as do not affect the main thesis or greatly impair the value of the work for those who are likeliest to use it.

—J. Le Gay Brereton.

A BRIEF SURVEY OF ENGLISH CONSTITUTIONAL HISTORY. By D. G. E. Hall, pp. 270. Harrap & Co. London. 1925. 5/- net.

In these last days, when the vast accumulation of material and its meticulous classification make the study and writing of history on a large scale a herculean labour, the competent compiler of the sketch, survey, or introduction—as it is variously called—performs a very valuable service for student and laymen alike. Several of our most distinguished English his-

torians have recently set an excellent example by laying aside the microscope for the telescope, with conspicuous success. Prof. A. F. Pollard's History of England, Prof. H. W. C. Davis's Medieval Europe, and Dr. Ernest Barker's The Crusades are amongst the best results of this welcome diversion of method.

There is another type of historical compendium—history in a hurry—which appears in ever-increasing quantity, to be welcomed only by the sciolist. But occasionally the wary student fishes from this turbid stream of printer's ink a little book like Prof. D. G. E. Hall's "Brief Survey of English Constitutional History" (Harrap, 1925), and is attracted by its modest efficiency. It is indeed a brief survey, ranging, in the course of 238 pages, from the "Germania" of Tacitus to the Reform Act of 1918.

In this subject fashion has changed more than once during the past three centuries. In the seventeenth century scholars like Spelman and Selden formed an adequate and well-balanced conception of the growth of the constitution, which prevailed until the mid-eighteenth century. Then Blackstone twisted it to accommodate certain contemporary social prejudices and quite unhistorical legal fictions. In the first half of the nineteenth century a more violent change of fashion was caused by German historians, such as von Maurer and Gneist, who were implicity accepted by Freeman and Stubbs. For two generations the English constitution was believed to have been "made in Germany"—as indeed it was, in an equivocal sense. But Maitland and Vinogradoff later purged our conception, exposing the unhistorical elements of the "Teutonic theory," by a re-examination—admirable in its detachment, rigour and acumen—of the historical evidence of the development of the constitution.

Mr. Hall, in his little book, has reviewed that growth from the standpoint of the Maitland school, as the comments in his excellent little bibliography shows, slight as it is, the book is scholarly, well proportioned and "up-to-date," interesting to the special student on account of its implications, and very creditable to the school of History in the University of London, whose impress its pages bear .

—J. F. Bruce.

THE UNITY OF LIFE: A Book of Nature Study for Parents and Teachers. By H. R. Royston, M.A. Pp. 280. Price 7/6 net. Harrap & Co., London, 1925.

This book, as stated on the cover, is intended as "a plea for the teaching of Nature Study, not as the mere observation of facts, but as the intelligent realization of the basic principles underlying these facts—principles which are derived from a unity which is to be perceived in the many and varied manifestations of life around us." This is a profoundly philosophical title for an elementary treatise on Nature Study; but, unfortunately, the book contains very little real philosophy. Within its 275 pages and sixteen chapters it covers a vast range of subjects. Few professional zoologists or botanists would have the courage to treat of all the important subjects indicated in the chapter heads, even superficially, in a nature study book. The book is very amateurish throughout. The substitution of accepted

scientific terms for colloquial ones, such as "sponging" for parasitism, and "marriage" for mating, are errors of judgment; and the reference to the ovule as an "egg," and the description of the "root-hairs" on the fern prothallus are errors of fact which are quite inexcusable.

—A. Anstruther Lawson.

EDUCATIONAL ADVANCEMENT ABROAD. Harrap & Co. Pp. 200. 1925. 5/- net.

This book consists of a series of contributions which originally appeared in the "Journal of Education and the School World." An introductory essay on "World Education: Some General Movements," by Professor Hearnshaw is followed by short chapters on educational movements in France, Austria, the United States, Holland, Scandinavia, Germany, Italy, Japan, Australia, and India. The ground covered is so extensive that the treatment of each topic is necessarily slight. For the general reader and for young students of comparative education the book will serve a useful purpose.

The chapter on Recent Developments in Australia devotes attention mainly to New South Wales. A brief reference is made to the changes resulting from the passing of the Education Acts of 1912 and 1916. "Since 1899, however, the growth of new educational ideals has led to extensive changes in the practical application of the Statute (*i.e.*, of 1880), inspired by endeavours to construct a national system which should correspond with the economic and political ideals of the people." Unfortunately, these extensive changes are not very clearly specified. It is doubtful, again, if it is "demonstrable that New South Wales, which is now spending about one-ninth of its revenue on education is doing the utmost feasible under present conditions." As a matter of fact New Zealand is doing more. It must also be noted that prospective teachers are not selected or assisted financially until the conclusion of their secondary course. The only scholarships specially reserved for teachers are those held by students of the Teachers' College. No reference is made to the school medical service, nor to the arrangements for physical training. Both are significant developments of recent years. There are other changes that deserve notice, but it is difficult to describe the changes taking place in a number of States within the compass of so short a chapter.

—A. Mackie.

JOURNALS RECEIVED.

JOURNAL OF PHILOSOPHY. Edited by Professors Woodbridge and Bush, Columbia University. Published fortnightly: four dollars per annum.

Vol. XXII. No. 19. Sept. 10, 1925. Moral Intuitionism, Feeling and Reason: L. A. Reid. Contemporary German Philosophy, II: E. Wind. No. 20. Sept. 24. The Problem of Reality: A. Aall. The Obscurantism of Science: H. G. Townsend. No. 21. Oct. 8. The Problem of the Specious Present and Physical Time: L. E. Akeley. Ethics in Philosophical Edu-

cation: E. F. Carritt. No. 22. Oct. 22. George Stuart Fullerton: E. A. Singer, Jr. The Naturalistic Theory of Perception by the Senses: J. Dewey. No. 23. Nov. 5. Individual Freedom with some Sociological Implications of Determinism: F. H. Hankins. Concerning the "Good Man" and the Moral Standard: J. R. Geiger.

PSYCHE. Edited by C. K. Ogden. Kegan Paul, Trench, Trubner & Co. London. Quarterly, price 5/-.

No. 22. Oct. 1925. Editorial: Noise and Nerves. Do Animals Laugh? A. Moore. The Origin of Instinct (as illustrated by the war between ants and termites, with 8 pages of photographs): E. Bugnion. From the Comparative to the Positive: F. G. Crookshank. Science and Poetry: I. A. Richards. Character and Adjustment: A. A. Roback. Living or Mental Activity: J. C. McKerrow. Natural Science and Speculative Philosophy: J. Kaye. The Evil Eye: H. C. Evans. A Search for Supreme Self: P. Mitra.

THE INTERNATIONAL JOURNAL OF PSYCHO-ANALYSIS: Directed by S. Freud, edited by Ernest Jones. Official organ of the International Psycho-Analytical Association. Bailliere, Tindall & Cox, London.

Vol. VI. Part 3. July, 1925. The Influence of Oral Erotism on Character Formation: K. Abraham. The Psychoses: Their Mechanisms and Accessibility to Influence: R. Walder. Hindu-Muslim Unity: O. Berkeley Hill. A Peculiar Custom observed in the Island of Marker, Holland: H. C. Jelgerma. Sensation and Narcissism: R. O, Kapp. A Case of Kleptomania in a girl of ten years: Mary Chadwick. The Psychology of the Effect Produced by Morphia: L. Levy.

ARCHIVIO GENERALE DI NEUROLOGIA, PSICHIATRIA E PSICOANALASI. Founded by M. Levi Bianchini Giannini e Figli. Naples. Annual subscription, 120 Lire.

Vol. VI. Nos. 3, 4. Oct. 1925. Morphogenesi dell'acquedotto cerebrale: L. Castaldi. La meccanica del sogno e l'ambivalenza del psichismo neurotico: M. Levi Bianchini. Un cas de Parksonisme encéphalitique avec autopsie: Urechia et Elekes-Cluj. Telepatia e psicoanalisi: E. Hitschmann. Modificazioni del diametro pupillare nel vari movimenti dei globi oculari: L. Igi. Fondamenti e progressi della "Psicologia Individuale": A. Adler.

SCHOOLING. Teachers' College Press, Sydney. Five issues yearly. 5/- per annum. Edited by A. Mackie and P. R. Cole.

Vol. IX. No. 2. Nov. 1925. Editorial Notes. D. Sinclair: The Study and Teaching of History. G. Mackaness: Verse Composition. Ena Rice: Sentence Structure of Compositions.

THE MEDICAL JOURNAL OF AUSTRALIA. Sydney. Published weekly, 1/-.

THE LEGAL JOURNAL. Sydney. Published monthly, 10/6 per annum.

NOTES AND NEWS.

Mr. W. A. Merrylees, B.A., B.Litt., has been appointed Senior Lecturer in Philosophy at the University of Melbourne. He graduated at Melbourne (1921) with First Class Honours in Philosophy, and went to Oxford as Victorian Rhodes Scholar. He is an Australian by birth, and is 24 years of age.

Mr. R. Jackson, B.A. (South Africa and Trinity College, Oxford), has been appointed a Lecturer in Philosophy at Sydney University. Mr. Jackson obtained First Class Honours at Oxford in the School of Litterae Humaniores in 1925.

Papers on the following subjects were read and discussed at meetings of the Auckland Local Branch of the Association during 1925:—Repression in Hamlet (A. B. Thompson, B.A.). Bertrand Russell's Philosophy (E. V. Miller). Intelligence Tests (C. C. Allen). The Problem of Evil (R. P. Hodge). The Illusion of Mechanism (Miss Crookes, M.A.). Kemp Smith's Theory of the Sensa (H. C. Becroft, M.A.). Relativity (E. V. Miller).

OFFICERS OF THE AUSTRALASIAN ASSOCIATION OF PSYCHOLOGY AND PHILOSOPHY FOR 1926.

President: Professor T. A. Hunter, M.A., M.Sc. (Victoria University College, Wellington, N.Z.).

Vice-Presidents: Professor W. Anderson, M.A. (Auckland), Professor M. Scott-Fletcher, M.A., B.Litt. (Brisbane), Professor W. R. Boyce Gibson, M.A., D.Sc. (Melbourne), Professor H. Tasman Lovell, M.A., Ph.D. (Sydney), Professor B. Muscio, M.A. (Sydney), Professor J. McKellar Stewart, M.A., D.Phil (Adelaide).

Editor of the Australasian Journal of Psychology and Philosophy: Emeritus Professor Francis Anderson, M.A. (Sydney).

Hon. General and Business Secretary: A. H. Martin, M.A., Ph.D. (*Address*: Dept. of Psychology, The University, Sydney, N.S.W.).

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Hon. Counsel: C. M. Collins, B.A., LL.B.

Hon. Auditor: W. Bruce Rainsford, A.I.A.A.

There are now Local Executive Committees of the A.A.P.P. in Melbourne, Auckland, and Wellington. Local members may send their subscriptions to Professor J. Alexander Gunn, M.A., B.Sc., Ph.D. (The University, Melbourne, or to Dr. J. L. G. Sutherland, M.A. (Victoria University College, Wellington), or to Mr. E. C. Becroft, M.A. (University College, Auckland)—according to their locality.

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